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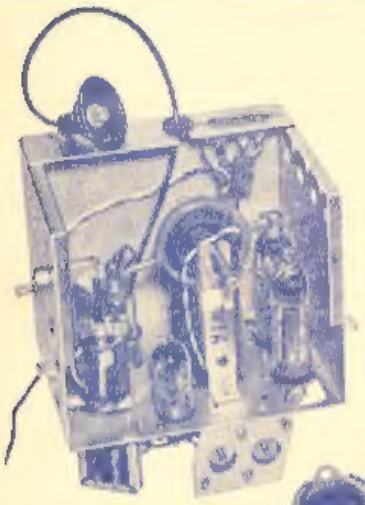

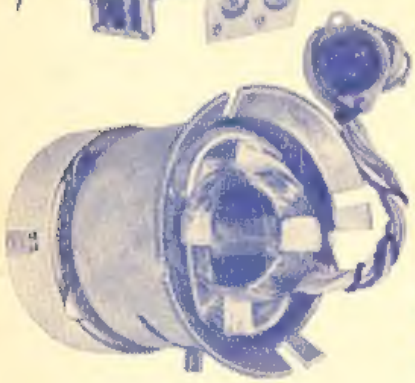

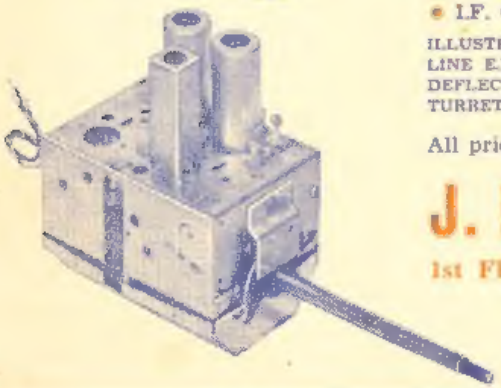

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2208.1 Kc.	5633.333 Kc.	6275 Kc.	6850 Kc.	7175 Kc.
2442.5 Kc.	5655.333 Kc.	6280 Kc.	6875 Kc.	7200 Kc.
2443 Kc.	5700 Kc.	6300 Kc.	6900 Kc.	7225 Kc.
2705 Kc.	5722.222 Kc.	6325 Kc.	6925 Kc.	7250 Kc.
2732 Kc.	5725 Kc.	6350 Kc.	6950 Kc.	7275 Kc.
2760 Kc.	5744 Kc.	6375 Kc.	6975 Kc.	7300 Kc.
2979 Kc.	5750 Kc.	6400 Kc.	7000 Kc.	7325 Kc.
2990 Kc.	5775 Kc.	6425 Kc.	7002.5 Kc.	7350 Kc.
3380 Kc.	5825 Kc.	6450 Kc.	7003 Kc.	7375 Kc.
3500 Kc.	5850 Kc.	6475 Kc.	7005 Kc.	7400 Kc.
3533 Kc.	5852.5 Kc.	6497.9 Kc.	7010 Kc.	7425 Kc.
3535 Kc.	5875 Kc.	6500 Kc.	7011.75 Kc.	7450 Kc.
3537 Kc.	5900 Kc.	6522.9 Kc.	7012 Kc.	7475 Kc.
3892 Kc.	5925 Kc.	6525 Kc.	7018 Kc.	7500 Kc.
3925 Kc.	5950 Kc.	6547.9 Kc.	7021.7 Kc.	7525 Kc.
4096 Kc.	5975 Kc.	6550 Kc.	7025 Kc.	7550 Kc.
4172 Kc.	6000 Kc.	6561.111 Kc.	7032 Kc.	7575 Kc.
4205 Kc.	6025 Kc.	6575 Kc.	7032.6 Kc.	7600 Kc.
4285 Kc.	6050 Kc.	6600 Kc.	7050 Kc.	7625 Kc.
4445 Kc.	6075 Kc.	6625 Kc.	7075 Kc.	7650 Kc.
4600 Kc.	6083.3 Kc.	6650 Kc.	7100 Kc.	7675 Kc.
4815 Kc.	6100 Kc.	6675 Kc.	7125 Kc.	7700 Kc.
4930 Kc.	6125 Kc.	6700 Kc.	7145 Kc.	7725 Kc.
5000 Kc.	6150 Kc.	6725 Kc.	7150 Kc.	7750 Kc.
				7775 Kc.

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All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI: Sundays, 1100 hours EST, 7146 Kc. and 2000 hours EST 56 and 144 Mc. No frequency checks available from VK2WI. Intrastate working frequency, 7125 Kc.

VK3WI: Sundays, 1130 hours EST, simultaneously on 3573 and 7146 Kc., 57.5 and 145.25 Mc. Intrastate working frequency 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI: Sundays, 0900 hours EST, simultaneously on 3560 and 14342 Kc. 3560 Kc. channel is used from 0915 hours to 1015 hours each Sunday for the W.I.A. Country hook-up. No frequency checks available.

VK5WI: Sundays, 1000 hours SAST, on 7146 Kc. Frequency checks are given by VK5MD and VK5WI by arrangements on all bands to 56 Mc.

VK6WI: Sundays, 0930 hours WAST, on 7146 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7146 Kc. and 3672 Kc. No frequency checks are available.

VK9WI: Sundays, 1000 hours EST, simultaneously on 3.5, 7, 14 and 144 Mc. Individual frequency checks of Amateur Stations given when VK9WI is on the air.

AMATEUR RADIO

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Melbourne, C.1.

EDITORIAL

FEDERAL CONVENTION

The federal administration of the Wireless Institute of Australia is one of the most important and the least understood parts of Institute affairs. It is important because upon it relies the administration of the Divisions of the Institute in matters which affect Amateur Radio, nationally and internationally, as distinct from purely domestic problems; it is least understood because the implementation of Federal Policy remains with a few in one State and these individuals' real ability to get things done is hampered by a Constitution which limits too greatly the powers of the federal administration organisation—the Federal Executive.

The Federal Constitution until 1953 provided for an Annual meeting of the Federal Council, the said Federal Council to consist of a representative (the Federal Councillor) from each Division of the Institute, who would sit in Convention—presided over, usually, but not necessarily, by the President of the Federal Executive—and fight, rightly or wrongly, for the majority decision of the members of his Division on any item on the Agenda placed before the Federal Council for its deliberation and resolution.

Due to various economic reasons the Federal Council holding office in 1953, in its wisdom, voted for the introduction of an amendment to the Federal Constitution wherein the meeting of the Federal Council, to discuss and resolve the problems of W.I.A. politics, would take place every two years instead of annually and that the expenditure thus saved from Divisional finance would be allocated to a fund to finance a delegate to the next Telecommunications Conference.

By a later agreement of the Federal Council two further years have been added to the two-year lapse and it is now four years since the Council last met. There is no substitute for the Convention table to keep alive the most important part of Institute affairs—the federal administration. It was only by virtue of the personal meeting of delegates in the past that some of the toughtest problems besetting the Federal Council were satisfactorily resolved. All the writing in the world can never replace the personal contact between Divisions of this Institute. There are those who, for personal reasons, will say that Federal Conventions are a waste of time and money, but these same persons either do little to further the Amateur movement within or without the Institute, or they just plain "don't understand and don't want to understand" how the federal administration of the W.I.A. is meant to function.

There is a Federal Convention in Melbourne this Easter from 19th April to 22nd April. If there is not a large or important agenda to discuss it can only be surmised that Amateurs everywhere are perfectly satisfied with their lot in Australia, perfectly satisfied with what the Institute is doing for them and have no complaints about anything to do with their hobby. But is this so? If it isn't, you can do something about it today through your Division. You have the power to see that your Division raises and resolves your problems for you in the right places in the right way.

FEDERAL EXECUTIVE.

THE CONTENTS

Notes on the Frequency Stabilisation of Transistor Oscillators

BY HANS J. ALBRECHT,* VK3AHH

THERE is now no doubt that transistors can be used in all types of electronic equipment. It must, however, be realised that transistor electronics are somewhat different to vacuum-tube technique. Transistor-minded engineers as well as Amateurs interested in this new electronic art have to become familiar with unusual operating conditions, both theoretically and practically. The theory of oscillation and oscillators in general have always justified a separate chapter in any electronic text book. Even more so, the transistor oscillator warrants a detailed discussion. Just as vacuum-tube oscillators, transistor oscillators have to be designed properly, in order to be of value for communication work. In fact, for the theory of oscillation it does not matter whether a tube or a transistor forms the maintaining circuit which maintains the oscillations of the oscillating circuit. Absolute frequency stability is one of the major requirements with oscillators designed for communication and research work.

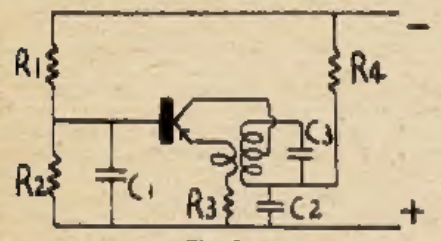

Fig. 1.

In general, the oscillating frequency is determined by the components of the oscillating circuit. The maintaining circuit, however, may cause a frequency shift if it contains some reactive components. No maintaining circuit is entirely free from reactance, but the effect may be more pronounced if a transistor is used. As is well known, a change of the operating point on the characteristics of the tube or the transistor may cause a change in the actual resonant frequency of the oscillator. Also, a change in ambient temperature is known to have an effect upon parameters which are temperature-sensitive, thereby initiating a frequency instability.

Whereas transistor oscillators have the advantages of economy, small size, negligible weight, and general indestructibility, their operating frequencies are liable to change considerably with changes in temperature or operating conditions. Nevertheless, the disadvantage can be remedied by correct design with optimum compensation.

It must be mentioned that, similar to vacuum-tube practice, frequency stabilisation is no problem if a crystal oscillator is used. For communication work, this oscillator is disadvantageous because of the frequency limitation. In addition, a crystal oscillator cannot be regarded as indestructible for the crystal may be damaged if the oscillator, or, for instance, the pocket transmitter, is accidently dropped.

The frequency stabilisation of transistorised v.f.o's. is a far more difficult problem. Some general stabilisation can be achieved by a resistance network. If one wishes to apply a stability factor to it, similar to the amplifier-design procedure discussed by the author in a recent article in this journal[1], values of one to two should be desirable. Fig. 1 depicts such an oscillator circuit which seems to be very popular in commercial broadcast sets.

According to [2], a low L/C ratio improves the frequency stability, due to a lower harmonic content. With another reference to vacuum-tube practice[3], an additional reactance of a certain value may be connected in series with one electrode, in audio and low-r.f. oscillators, and some stabilisation can be achieved.

The amount of stabilisation obtainable with the means described thus far is not sufficient for most h.f. applications. As a result of numerous experiments and careful analysis, the author concludes that the temperature sensitivity may be attacked from a different angle. A system has been developed to eliminate temperature effects upon the frequency of transistor oscillators and other tuned-circuit transistor equipment by using temperature-sensitive components in the oscillating circuit. This investigation was largely based on the author's research papers on the scientific usage of circuit components of high temperature coefficients. To an extent, his article in this journal on the temperature compensation of v.f.o's.[4] can also be described as a basis. This temperature compensation of transistor equipment is effected by designing and selecting the inductive and capacitive circuit components such that an overall temperature-sensitivity is eliminated. It can be established that the overall temperature coefficient of the transistor-oscillator frequency, per degree Centigrade, here represented by "N", is a function of the L/C ratio, and of transistor parameters, here represented by "A":

$$N = g\ (L/C, A) = \Delta f/f \quad \ldots (1)$$

where $\Delta f/f$ denotes the relative change in frequency per degree Centigrade.

In this relation, "A" is supposed to be representative of all effects caused by the transistor itself, including the operating frequency with respect to the cut-off frequency of the transistor concerned. Assuming that a mathematical analysis of the above function would be beyond the scope of these notes, the author wishes to restrict himself to a description of the design of a compensated transistor oscillator.

To determine the temperature coefficient to be used in the inductance or capacitance of the tuned circuit, the following formula is useful for approximate values:

$$TK = \frac{1}{(1 - N)^2} - 1 \quad \ldots (2)$$

where TK = temperature coefficient of circuit component.

A proper way of determining N experimentally would be to build a small transistor oscillator and inserting it in a temperature-insulated container. The temperature inside the container, as close as possible to the transistor, can be measured by normal means (mercury or electrical thermometer) and may be varied by means of a small electrical heating. Care should be taken to ensure that the maximum temperature for the transistor concerned is not exceeded. Thus it may be necessary to place the oscillator inside a refrigerator in order to obtain a sufficiently large variation of temperature. A difference of ten degrees Centigrade (about eighteen degrees Fahrenheit) should be adequate for most purposes. "N" can then be found with respect to temperature. If only approximate information is required, which is sufficient for many applications, the ambient temperature of the transistor oscillator may simply be altered by exposing it to hot air produced by a hair-drying machine.

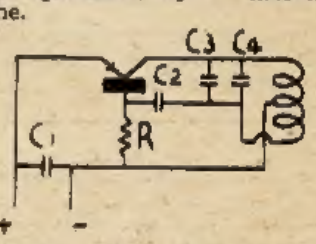

Fig. 2.

Knowing N, TK can be found by substituting in eq. (2). Inductance and capacitance can be used for temperature compensation, as both may have an adequate temperature coefficient. However, if a certain amount of fixed capacitance is not objectionable in the circuit design, and for v.f.o's. with bandspreading it is even desirable, compensation by a temperature-sensitive capacitance is perhaps more popular. In any case, there is no fundamental difference between the two methods and compensation by a temperature-sensitive inductance can be done on very similar lines.

With capacitance compensation we have this well known formula:

$$TK_t\ C_t = TK_m\ C_m + TK_n\ C_n \text{ etc.} \quad \ldots (3)$$

where C_t = total capacitance = $(C_m + C_n)$.

TK_t = overall temperature coefficient of capacitance combination.

(Continued on Page 3)

* 10 Belgravia Ave., Box Hill North, E.12, Vic.

A Low-Power Transmitter or Exciter for "2"

BY K. B. MITCHELHILL,* VK2ANU

INTRIGUED with the difficulties that some have had in operating the 2E26 as a straight amplifier on 144 Mc., the author decided to try the tube out for himself. The main difficulties were drive and neutralisation, and the little rig here described is the result, constructed on a 7" x 5" x 2" chassis. It may be just the thing for those interested in something for two-metre mobile or to drive something bigger.

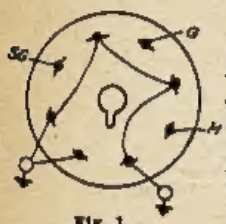

Fig. 1.
2E26 socket wiring. A miconol socket from I.F.F. unit is ideal.

A parallel 12AU7 and 12AT7 were tried in their turn with conventional circuits to drive the 2E26, but in each case the mills were lacking. The only other tube on hand was a 6BW6, so it was decided to give it a go. This tube has been used by mobile services up to 80 Mc. and on looking up the data found that it could be used as high as 150 Mc. as a frequency multiplier, but have yet to see a circuit using it so high in practice.

Using the 6BW6 as shown, with the so-called series tuned circuit, and coupling it to the 2E26 the drive across the 15,000 ohms grid resistor was 3 to 3.5 Ma. with the supply voltage as shown. The series tuned circuit closely resembles the pi-coupler except for the fact that the high voltage is fed to its centre through an r.f.c. It was found to be superior to other methods of coupling.

The main difficulty encountered with the 2E26 is neutralisation, and after a little experimenting, this was traced to the method of wiring the 2E26 socket. If it is wired as shown it can be operated without the series screen r.f. choke or the 3-30 pF. trimmer sometimes required. A shield was also provided between the 6BW6 and 2E26.

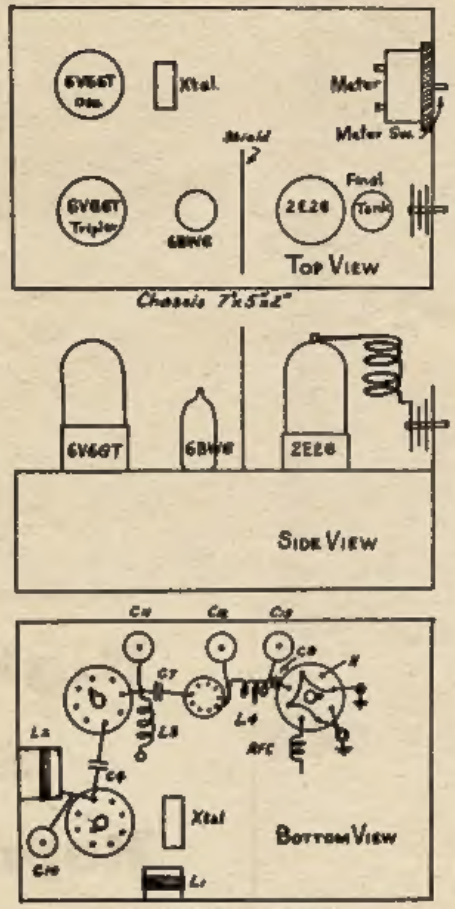

Fig. 3.—General Layout.
The bottom view shows the layout of coils and coupling condensers, also orientation of sockets.

Series tuning is used in the 2E26 tank circuit and it enabled a coil of reasonable dimensions to be used, output being taken from a one or two turn link at the centre of the coil.

The line-up of the earlier stages of the rig is conventional, consisting of a 6V6GT tri-tet on 8 Mc., tripling to 24 Mc., followed by another 6V6GT tripler to 72 Mc., which delivers approx. 1½ Ma. to the 6BW6 through a 20,000 ohms resistor.

With an all round supply voltage of 250v. the final was loaded to 12.5w. with approx. 2½ Ma. grid drive. So how about it, 2 metre fans?

Constructional Note.—Drill out the head of a small bolt and sweat the Philips' trimmers to same. The condensers can then be bolted direct to the chassis in the positions shown.

— • • • —

FREQUENCY STABILITY OF TRANSISTOR OSCILLATORS

(Continued from Page 2)

For vacuum-tube oscillators (see the 1952 article in this journal) TK_t is supposed to have a value between

-50 and -200×10^{-6} per degree C.

This allows for the coefficient of coil and stray capacitance. For the compensation of a transistor oscillator, TK, as found by eq. (2), replaces TK_t in eq. (3) with a minor adjustment to allow for the temperature coefficient of coil and stray capacitance, as above. C_a and C_b, which represent the main capacitance [in eq. (3)] of the oscillating circuit, permit the complete temperature compensation of resonant frequency variations in a transistor oscillator. Fig. 2 shows a transistor oscillator frequency-stabilised, as described above, by C_b and C_t which replace C_a and C_b in the calculation above. If the L/C ratio is high the necessary temperature coefficient becomes so high that the ordinary type of ceramic condenser, approximately -750×10^{-6}, is inadequate. In such cases, so-called Hi-K and perhaps medium-K condensers may have to be utilised. These capacitors, however, must be selected individually, because of the relatively large factory tolerances in both, capacitance and temperature coefficient. For this purpose, the capacitors should be carefully measured, as mentioned earlier in these notes. Any capacitor with a sudden change in its temperature characteristics has to be rejected.

Summarising, it may be mentioned that the author has successfully used this method of frequency stabilisation for many applications in transistor electronics. Results and performance have been satisfactory from all points of view.

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(1) H. J. Albrecht, "Design Notes on Transistorised Audio Amplifiers," "A.R.," Jan., 1957.
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(3) F. B. Llewellyn, "Constant Frequency Oscillators," Proc. I.R.E., 1931.
(4) H. J. Albrecht, "Simple V.F.O. With Temperature Compensation," "A.R.," Dec., 1952.

* "Inglewood," Muscle Creek, Murwellbrook, N.S.W.

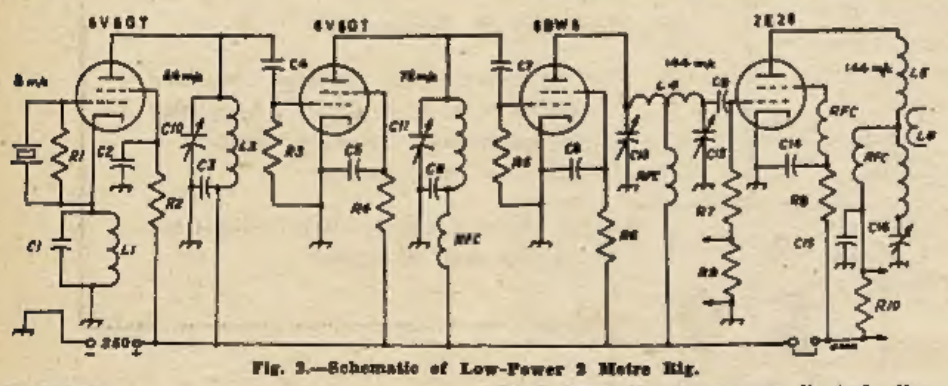

Fig. 2.—Schematic of Low-Power 2 Metre Rig.

C1—100 pF.
C2, C3—0.01 uF.
C4, C7, C9—50 pF.
C5—0.005 uF.
C6, C8—0.001 uF.
C10, C11, C12, C13—3-30 pF. Philips' trimmers.
C14, C15—500 pF.
C16—15 pF. variable.
L1—8 turns No. 27 enamel, close wound on 1⅛ inch former.
L2—6 turns No. 18 enamel, close wound on 1⅛ inch former.
L3—4 turns No. 16 tinned copper, ⅜ inch diam., spaced one turn.
L4—5 turns No. 14 enamel, ⅜ inch diam., spaced one turn, centre tapped.
L5—4 turns No. 12 enamel, ⅜ inch diam., spaced one turn, ½ inch gap at centre.
L6—1 or 2 turn coupling link.
R1—50,000 ohms.
R2, R4—25,000 ohms.
R3—100,000 ohms.
R5—30,000 ohms.
R6—10,000 ohms.
R7—15,000 ohms.
R8—25,000 ohms.
R9, R10—Meter shunts.
R.F.C's.—As from I.F.F. Unit.

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M2360

A Transistorised Miniature Transmitter

BY HANS J. ALBRECHT,* VK3AHH

THE introduction of transistors into electronics has already revolutionised equipment of every description. Reduced to real midget size, transistorised apparatus offer unique economy, and power requirements are a mere fraction of what we were used to with ordinary vacuum tubes.

In this article, the author wishes to describe a midget single-stage transmitter he actually designed for scientific applications. It is, however, equally suitable for C.D.E.N. communication work, in which an astonishing interest seems to have been created recently.

Words cannot adequately emphasise the importance of efficient point-to-point communication in cases of C.D. emergencies. Only small, light and reliable equipment will enable C.D. operators to do their duty.

For these reasons, the transmitter, with built-in "power supply", is housed in an ordinary match box. Its weight amounts to 1.75 ounces. Its reliability has been tested thoroughly and was found to be satisfactory in every respect. The operating frequency being in the 3.5 Mc. band, the selection of a

Fig. 1.—Transistor Transmitter in a Match Box.

suitable transistor is one of the more important points in the design. Whereas point-contact transistors have been produced for u.h. frequencies, the more reliable type of transistor, the junction-type, has a lower frequency limit. However, junction-triode transistors with cut-off frequencies in the range of 4 to 7 Mc. have, for some time, been available overseas, and commercial production is indicated for junction transistors with cut-off frequencies above 50 Mc.

For the purpose of the transmitter under discussion, a junction triode OC45 was chosen and has been found to be satisfactory and stable in its operation. It is understood that this type of transistor will become generally available in Australia at the time of publication of this issue. Experiments have also been made with junction triode OC71. Although its cut-off frequency is supposed to be around 300 Kc., selected transistors of this type were capable of oscillation up to frequencies of the order of 1000 Kc. If larger quantities of OC71 were to be tested, some may show such a property on even higher frequencies.

Of necessity, the number of components employed should be kept at a minimum. On the other hand, absolute stability is a major requirement. A possible choice would be a crystal oscillator, but present-day communication standard and C.D. requirements do not make it desirable to use such an oscillator. Further, crystals may be damaged in active C.D. work, when operators and equipment may be exposed to somewhat unusual conditions. Thus this pocket-size transmitter was designed as specially stabilised LC-oscillator. The author described the relevant methods of stabilisation in his "Notes on Frequency Stabilisation . . . ," published elsewhere in this issue.

The photograph in Fig. 1 depicts the complete transmitter in the hand of the operator, while the second photograph shows the inside of the match box. The arrangement is such that the "power supply", consisting of a single pen-light cell (1.5 volts) occupies the left-hand side of the box, while the coil is in the lower part of the right-hand side. Transistor and compensating capacitors fill the rest of the "cabinet." A 50 pF. trimmer is attached to the top (right-hand side). This serves as tuning condenser. The antenna is connected to the hot end of the trimmer.

To determine the overall temperature coefficient N, the first step is to construct a test oscillator with the inductance to be used and a circuit capacitor with zero or low temperature coefficient, assuming that capacitance compensation is desired. Variable air condensers, two in parallel if necessary, are ideal test condensers for this purpose, because their temperature coefficient is negligible. The circuit diagram is the same as that for the actual transmitter, shown in Fig. 3.

As mentioned before, all components must be small. This, in addition to the requirement of a low L/C ratio to simplify the stabilisation, necessitates a relatively small inductance. And, of course, this coil has to be physically small as well, to fit it into about a quarter of the space inside the match box (see Fig. 2).

Fig. 2.—The inside of the Match Box.

An inductance of about 3.1 microhenrys was found to be a good compromise. It consists of 16 turns (centre-tapped) with a diameter of about 0.65 inches and length of about 0.47 inches, and is wound on a slug-tuned former.

Other values in the circuit are R = 47,000 ohms, C1 = 0.01 uF., and C2 = 100 pF. These components have to be of small size, in order to leave as much room as possible for the compensating capacitors. This requirement is taken care of by a small ½ watt resistor for R and Hi-K disc type for C1. The transistor and its socket do not take much space. It may be advisable to construct the oscillator such that the transistor is close to the compensating capacitors to ensure optimum compensation. However, the match box in its entirety can be expected to be subject to the same temperature fluctuations.

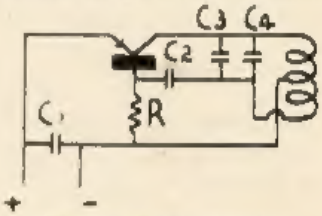

Fig. 3.—Circuit Diagram.

The next step is to make the temperature measurements described in the author's article elsewhere in this issue. With an OC45 transistor in the test oscillator, the frequency variation around 3550 Kc. was found to be 0.0 Kc. per degree Centigrade towards lower frequencies. Thus N is negative and its value is —0.000169.

Substituting this in the relation

$$TK = \frac{1}{(1 - N)^2} - 1$$

TK is found to be about —338 TK units, indicating that the compensating capacitance has to decrease with increasing temperature. Assuming that the temperature coefficient in the capacitance of the test oscillator was zero, the actual capacitance in the oscillating circuit must have the above temperature coefficient, in order to stabilise the oscillator frequency.

The total capacitance being about 650 pF., and allowing for stray capacitance and trimmer capacitance (at a TK of —500 TK units), the compensating combination is formed by C3, at 300 pF. and —750 TK units, and C4, a mica condenser combination at 300 pF. and about +80 TK units.

The 1.5 volt dry cell being incorporated in the transmitter, provision must be made for two leads to which an external key can be connected. Alternatively, these leads may be utilised as key. Referring to the circuit diagram, the key is simply in series with the positive connection. With the built-in dry cell a power input of 1.65 milli-

(Continued on Page 11)

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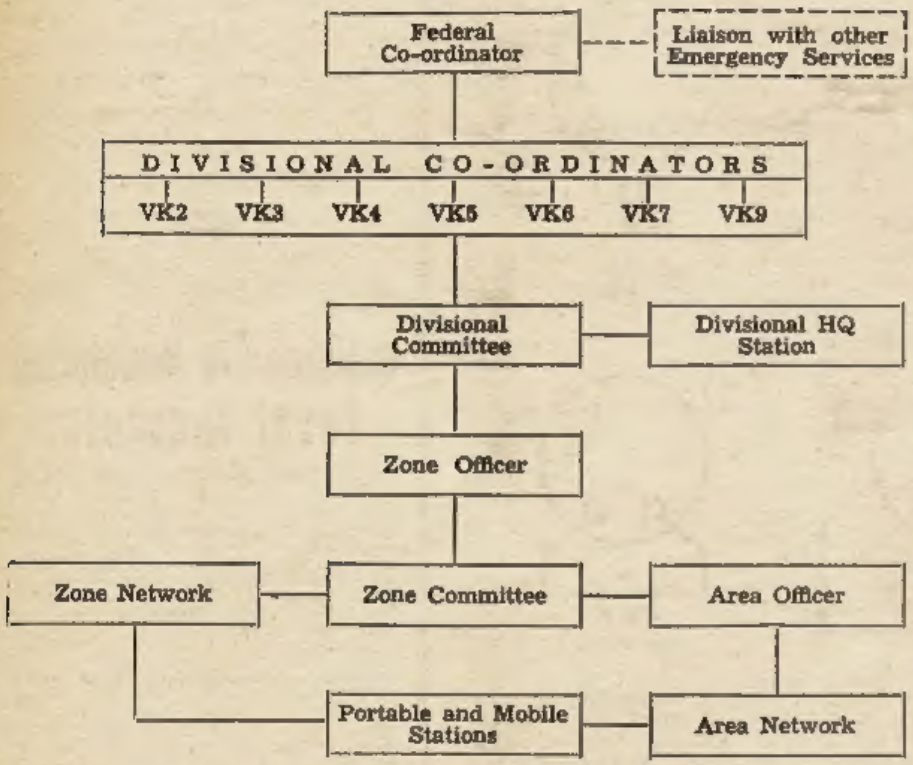
Civil Defence Emergency Network

The relentless southern advance of the red tide is slowly awakening officialdom and the public alike to the necessity for preparing for all eventualities. The C.D.E.N. is designed to play its part when that time comes, however in the meantime there are many other forms of national emergency in which members of the C.D.E.N. can render valuable service.

Floods, bush fires and other natural disasters each year take toll of human life, disrupt communications and often endanger whole communities. The Australian Amateur has always bridged the gap in communications and performed nobly in such emergencies in the past.



The objects of C.D.E.N. are:—

(a) To organise the Amateur communication network to a high degree of reliability.

(b) To establish standard procedures and equipment in order to ensure complete understanding, mobility and interchangeability in the event of any serious emergency.

(c) To integrate Amateur communication network with the Commonwealth Civil Emergency Scheme.

Unfortunately in some States, both inside and outside Amateur ranks, there is a deeply rooted conviction that emergency communications will be adequately handled by existing services operated by government instrumentalities. Past experience has proved that this opinion is based upon false premise. In the event of a real national emergency the regular communication services will have their hands full restoring service. The Amateur, on the other hand, is able to go anywhere and serve the public to the best advantage. Furthermore, the Amateur is able to fill breaches in communication services until authority concerned has been able to re-establish regular service or call in one of the regular defence services to take over.

The first task your Divisional or Zone Co-ordinator has to undertake is the breaking down of such prejudices, both inside and outside our ranks.

The second task is to establish contact with all parties interested in emergency communications such as Postmasters, Police, Ambulance, Red Cross, State Relief, Forestry, Electrical Authority, Small Ships. (Contact with the three Fighting Services and Central Postal Administration being the responsibility of your Federal Executive.)

His third task is to form a small committee of selected Amateurs imbued with the desire, and fully aware of the necessity of selling C.D.E.N. to all local authorities and their fellow members.

This committee should include one officer whose main task is to interpret technical requirements of equipment to be used and to select suitable sites for fixed stations. To familiarise members with types of service equipment they may be called upon to operate in an emergency.

Another officer undertaking the task of surveying existing communications in each area and preparing plans to cover each eventuality.

A third member should accept responsibility of surveying and maintaining a status record showing which Amateurs are able to operate in which bands and should correlate local transmission data.

A fourth member being delegated the task of instructing members in unified operating procedure and conducting regular exercises.

The committee as a whole must work with the following plan in mind:

(1) Training of operators to meet all forms of emergency.

(2) Training members to operate as W.I.A. network in normal emergencies.

(3) Instilling in members the necessity of operating in the master scheme envisaged in time of national emergency.

(4) Teaching proper operating procedure which must be based upon the J.A.N. procedure and not upon local ideas.

(5) Recognition of the Service as a whole with the individual subjugating him or herself to the common good.

An organisation chart covering C.D.E.N. is published herewith for your guidance. In future issues of "Amateur Radio" will appear reports of C.D.E.N. activities together with answers to queries raised by members. New developments and outstanding performances will likewise receive mention in this column.

— • • • —

TV OPERATOR'S CERTIFICATE

The Australian Broadcasting Control Board has notified the following candidates that they were successful at the examination held on 11th December, 1956, for the Television Operator's Certificate of Proficiency:

Melbourne: Albert Edward King, James Edward Davern, Robin James Huntley Clarke, William Robert Moffatt, Ewan Leslie Downing, John Duffy, Alfred Hobden Bowley, Maxwell Norman Manning, Alexander William Algie, Roger Noel Torpington, Noel Serpell, Ronald William Hunt, Ronald Frederick Schmidt, Roland Kim Wing Lau, George Albert Tidy, Edward Alan Wagner, John William Watson, Thomas Matthew Orgill, Brian Carroll Rodgers, Maurice Francis Pritchard, Ian Leslie Hill, George Samuel Blake Horrocks.

Sydney: Leonard James King, Stanley Victor Keith Ellis, Harrie Newton Adams, Leslie Bernard Weldon, John Langdale Garton, John William Hicks, Grahame Morton Jeffery, Leopold Klososzczyk, James Kingsley Bagot Stack, Raymond Walter Patterson, Alan Hugh Llewellyn, George Mathew Everingham, Frederick Arthur Haynes.

The examination was conducted by a Board of Examiners comprising officers of the Australian Broadcasting Control Board, Mr. R. H. Mondell (of the Department of Technical Education, Sydney), and Mr. F. A. Kempson (of Royal Melbourne Technical College).

Examinations are conducted twice yearly, on the second Tuesday of June and December. Applicants who have passed any sections of the examinations on a previous occasion will be exempted from those sections for a period of 12 months, that is two half-yearly examinations succeeding the passing of the sections.

The next examination will be held in Sydney and Melbourne on 11th June, 1957. Applications for the June examination must be lodged with the Secretary of the Board, 497 Collins St, Melbourne, by 15th May, 1957.

Combining 6v. and 12v. Filament Operation

BY W. J. HOWSE,* VK6ZAA

HOW many Amateurs have found the need to operate some equipment such as Command transmitters and receivers from a 12 volt source, as well as their usual 6 volt equipment? Also the new mobile and portable regulations may mean that Amateurs will want to operate some of their home station equipment in the car which may have a 6 or 12 volt system.

POWER SUPPLIES (bottom views of sockets)

Fig. 1 (a).
One 6v. source only.

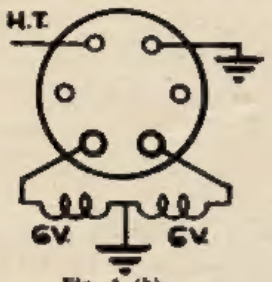


Fig. 1 (b).
Two 6v. sources.

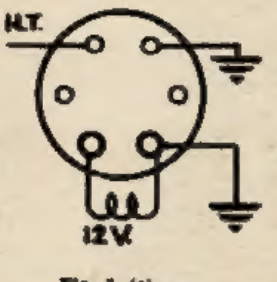


Fig. 1 (c).
12v. only available.

EQUIPMENT (bottom view of plugs)

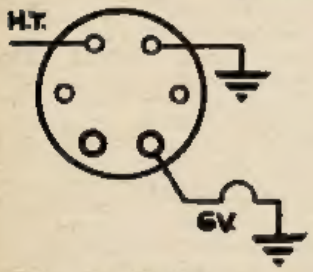


Fig. 2 (a).—6v. only.

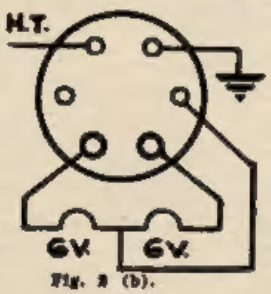


Fig. 2 (b).

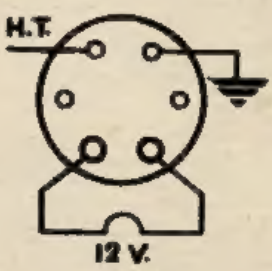


Fig. 2 (c).

The following system was the result of making many portable and mobile excursions and has proved itself during the last twelve months. Basically the system allows the wiring up of 6 volt and 12 volt gear to the **one type of power plug**. This plug can then be placed into any power supply with no possible damage to any equipment. Only in two cases will the equipment fail to operate, these being naturally the operation of 12 volt equipment from a 6 volt source, and 6 volt equipment from an untapped 12 volt source.

The writer uses a 6-pin socket and plug which allows the use of a heavier gauge wire than does the conventional octal plug. The value of a heavy gauge wire for filament leads cannot be over-emphasised. A check of the voltage drop across a length of 7/010 will confirm this. An octal plug can, of course, be used with slight modification of the ideas shown in the diagrams.

As will be realised the most benefit is to be gained by the arrangements shown in Figs. 1 (b) and 2 (b). For mobile operation from a car with a 6 volt battery system (as I do), I have found the best arrangement is to connect a second 6 volt battery with its negative terminal earthed to give me this arrangement which corresponds to Fig. 1 (b).

With a 12 volt electrical system the arrangement shown in Fig. 1 (c) has to be used with no provision for the operation of 6 volt equipment.

If portable trips are made using 12 volt batteries independent of a car earth, tapping of this battery can be made. One point to remember is that one side of the primary winding on the genemotor must not be connected to earth if this centre tap earth system is used.

One drawback of the above system of wiring is that there is a little extra work in wiring up the filaments in equipment using connections Figs. 2 (b) and 2 (c), but it is claimed that the versatility of the final product more than justifies this. The versatility is such that the above system has been proposed for adoption by the W.A. V.h.f. Group for use in their emergency gear!

Fig. 3.

* 53 Ellen Street, Fremantle, W.A.

AMATEUR CALL SIGNS

FOR MONTH OF DECEMBER, 1956

NEW CALL SIGNS

VK— Australian Capital Territory

1YL—D. A. Robertson, 39 Carrington St., Deakin, Canberra.

New South Wales

2DR—N. F. Wilde, Wyoming, The Village, Blayney
2KC—W. S. Steinwede, 665 Anzac Pde., Maroubra Junction.
2TP—R. B. Palmer, Wee Waa St., Boggabri.
2ZBU—A. M. La Macchia, 41 Ruthven St., Bondi Junction.
2ZBX—P. B. Card, 17 Watson St., Bondi.
2ZCD—J. F. Dalstead, 14 Barbara St., Fairfield.
2ZCP—P. Crocker, 11a Arden St., Waverley.
2ZJB—S. J. Brown, 5 Kentwell Ave., Thornleigh.
2ZJD—B. J. Dwyer, 38 Highgate St., Bexley.

Victoria

3UB—R. D. Tymms, 9 Flinders St., Mitcham.
3WJ—L. G. H. T. Robertson, 5 Currajong Ave., Camberwell.
3AEL—A. F. Elliott, 31 Fenton St., Ascot Vale.
3AQZ—J. G. Colley, Station: Heatherlea Gve., Lakes Entrance; Postal: 28 Charles St., Traralgon.
3ZDC—T. P. Said, 22 Rosebank Ave., Strathmore.
3ZDK—R. C. Rutledge, 40 Lawson Pde., Highett.

Queensland

4PF—F. R. Parker, 69 Boundary St., Townsville.
4RF—F. J. Lubach, 21 Bovelles St., Camp Hill.
4UN—R. J. Scott, 12 Doris St., West End, Brisbane.
4ZAC—A. B. Doran, 417 Newman Rd., Geebung, Brisbane.
4ZAN—R. D. Grandison, 141 Mail Service, Mt. Crosby.
4ZAO—C. W. Everdell, Gleneagle, Beaudesert Line.

South Australia

5DL—T. P. Drake, 35 Balfour St., Nailsworth.

Western Australia

6TL—T. S. Long, 106 Spencer St., Bunbury.

Territories

9AD—S. Davies, Douglas Drive, Norfolk Isl.

CHANGES OF ADDRESS

VK— New South Wales

2IY—T. H. Cahill, C/o. Royal Oak Station, Broken Hill.
2AAD—R. Hodgins, 171 Shelley St., Toronto.
2ZAQ—L. W. Cook, 47 Archer St., Chatswood.

Victoria

3DW—K. Cakebread, 2 Perth St., Benalla.
3QZ—J. G. Colley, 28 Charles St., Traralgon.
3ADH—D. H. Holmes, 223 Raymond St., Sale.
3ATW—W. A. Trenwith, 14 Small St., Hampton.
3ZCP—A. D. Pridgeon, Alfred St., Hastings.

Queensland

4RE—R. H. Hildred, 8 Netterville St., Toowoomba.
4VO—A. F. Wrembeck, Glencoe, via Toowoomba.
4XW—G. Harmer, 85 Rutland St., Coorparoo, S.E.2.

South Australia

5HE—H. V. Eastwood, 62 Grant Ave., Rose Park.
5KD—D. F. Dawson, 1 Hill St., Elizabeth Sth.
5SL—N. L. Sjoberg, 34 Fischer Rd., Henley Beach Sth.
5UR—C. G. Rowe, 17 Wilpena Ave., Parkholme.

Territories

9YT—C. Zimmer (Rev.), Papitalai P.O., Momote, Manus Is.

CANCELLED CALL SIGNS

VK— New South Wales

2RI—R. M. Tutton. Transferred to Victoria.
2UN—R. J. Scott. Now VK4UN.
2ZAH—W. H. Harder
2ZBK—N. F. Wilde.—Now VK2DR.
2ZCS—W. S. Steinwede. Now VK2KC.

Victoria

3ZBE—A. F. Elliott. Now VK3AEL.

South Australia

5FD—J. F. Harris.
5ZAD—P. M. Williams.

Western Australia

6ZAL—T. S. Long. Now VK6TL.

Tasmania

7PH—N. G. Williams.

PERMITS GRANTED FOR TELEVISION EXPERIMENTS

VK— New South Wales

2AHX/T—F. N. Orvad.

Victoria

3FO/T—C. R. Gibson.
3GB/T—G. P. Butler.

W.I.A. OFFICIAL LISTENERS' NUMBERS

Following are additions to Victorian Division, W.I.A. Official Listeners' Numbers:—

WIA-L3036—J. Pitman, 47 Maple St., Blackburn.
WIA-L3037—H. Zaal, 4 Willis St., Traralgon.
WIA-L3038—K. G. Crockford, 15 Lyndock Ave., Warrnambool.
WIA-L3039—D. Jenkin, C/o. P.O., Orbost.
WIA-L3040—J. McEwen, 28 Flowerdale Rd., Glen Iris.
WIA-L3041—L. McCluskey, 13 Halloway St., Newport.
WIA-L3042—E. Trebilcock, 340 Gillies St., North Fairfield.
WIA-L3043—R. Espie, 3 Haynes Cres., Glen Iris.
WIA-L3044—T. Phefley, 9 Bruce St., Moe.
WIA-L3045—M. Swinden, 12 The Glen, Lower Ferntree Gully.
WIA-L3046—I. Wardle, 346 Main Rd., West St. Albans.
WIA-L3047—D. Holmes, 7 Russel Ave., Warrnambool.
WIA L3048—C. Brittlebank, The Esplanade, Dennington.
WIA-L3050—B. Stebbing, 31 Rupert St., West Footscray.

These numbers are additional to those listed in the 1956 issue of the "Australian Radio Amateur Call Book," issued by the W.I.A.

Any associate member of the Victorian Division, W.I.A., should apply to the Hon. Secretary S.w.l. Group, Ian J. Hunt, 211 St. Georges Rd., Northcote, N.16, Vic., if an official listeners' number is required.

Associate members of the W.I.A. in other States should apply to their Divisional Secretary.

A Suggested New Reception Report System

BY ING. LIVIU MACOVEANU, YO3RD

THE present system of reception report is well known to all Radio Amateurs and consists of three figures, meaning Readability, Strength and Tone (for c.w.) or Speech Quality (for phone). In short, it's the RST and RSM system, unanimously employed by Hams all over the world.

However, from my 21 years' Amateur experience I have drawn the conclusion that this means of reporting is not at all conclusive and satisfying.

The present article puts forward a novel report-system, which—in my opinion—will be more efficient and more useful than the one presently in use.

The element I want to deal with above all is the signal strength, expressed in S-points.

Let us assume that c.w. signals from some place on the globe—Rumania, for instance—are received at a great distance—Argentina, for instance. Suppose that the signal strength at the receiving end were S9 at the particular moment and the whole report was RST 339. That would mean, at first sight, that r.f. voltage in uV/meter at the receiving end was very low, owing to several factors such as poor propagation at that end, low radiated power of the transmitter, unmatched antenna directivity at both ends, poor receiver sensitivity, etc.

The mere report in S-points cannot, however, make clear to the Ham the reasons why he has received such a poor report and therefore he cannot realise what steps he must take in order to improve his transmission.

With the goal of avoiding "cut and try" in mind, I have conceived the novel reporting system, described hereunder.

Let us assume that the receiving end in Argentina has picked up—in approximately the same period of time—c.w. signals either from Rumania, her neighboring countries or the rest of Europe. If the mean signal strength of the other c.w. signals from Rumania is about S3, that means that either the propagation is poor for Rumania, or the receiver has low sensitivity. From the very beginning it can be seen that the other possibilities of defficiency (radiated power and antenna directivity) can be left out. Perhaps, only the receiving antenna directivity could be taken into account. If, during the same period of time, other c.w. signals from the same country (Rumania) were below a mean S3, it would mean that the first transmission considered was the best. On the contrary, if the other signals had a higher mean signal strength, it would mean that the transmission in question was not too good. Therefore it would be right to work on such factors as radiated power and antenna directivity in order to improve the transmission.

These simple remarks, make clear to the Ham several valuable facts.

One could ask what to do in case there were not—at that particular moment—other signals from the same country so as to figure the mean signal strength. In such a case, one could take for comparison signals from the neighboring countries situated on the same time-strip. The error will not be too great, due to the fact that, generally speaking, the propagation is practically the same, at a given time, for such countries.

• This article by YO3RD appears as a proposal to Hams all over the world. It will be thus subjected to criticism, suggestions, and/or consideration by as many Radio Amateurs as possible. The author will be very glad to receive letters concerning the proposed system.

In case there are even no signals from the neighboring countries of the station hooked-up with, it would be very useful to report the approximate mean signal strength of at least 10 stations scattered all over the continent in question.

It occurred to me many times that out of Oceania, for instance, I could only hear two or three stations at a certain moment. Although the signals were only S4 or S6, they could be considered the best ones from that part of the world and therefore, for the receiving end, they fulfilled the best requirements from all points of view. This is why an overall report in S-points, per continent, should prove itself most useful, though it may seem inoperative.

SUGGESTED SYSTEM

In the light of the above, the practical way to solve the reporting problem would be to modify the present RST report as follows: **RSSSST for c.w.** and **RSSSSM for phone.**

The **first** S is merely the usual signal strength of the station received.

The **second** S is for the approximate mean signal strength of other stations from the same country heard within not more than 10 minutes before contact has been established.

The **third** S is for stations from neighboring countries—within the same time strip—received not more than 10 minutes before contact has been made and, finally,

The **fourth** S applies to stations from the remainder of the continent in the same time limit of 10 minutes.

In case there were heard no stations for comparison, the corresponding S would be replaced by the letter N (on c.w.) or Nil (on phone).

The above proposed system can be equally used for stations within the same continent, in which instance the meaning of the fourth S being much smaller.

This new system shall not only give the individual Ham a better view of the quality of his transmissions, but makes "listening before calling" compulsory, in order to realise the mean signal strength per country, neighboring countries and continent.

Although the reports are somewhat subjective, they will by no means be less useful than the usual and mere RST or RSM report.

At the beginning, the new method will seem difficult until one becomes fully familiar with it. I am completely sure, however, that in the future very many Hams will use it exclusively.

—Ing. LIVIU NACOVEANU, YO3RD,
C/o. P.O. Box 95,
Bucharest,
Rumania.

— . . . —

TRANSISTORISED MINIATURE TRANSMITTER

(Continued from Page 5)

watts can be obtained. Increasing the supply voltage causes the input to rise. For this purpose, an external "power supply", consisting of three pen-light cells in series in another match box, can be connected in series with the key leads. The operating conditions produced by this total of six volts are still within the ratings of the OC45, the power input being approximately 30 milliwatts. Whereas c.w. seems to be the only efficient type of operation with the lower input, a reasonable modulation level can be achieved by a carbon microphone in series with the external "power supply".

It may here be mentioned that the use of solar cells cannot be recommended for C.D. work. Although these solar cells have recently been publicised overseas as ideal transistor supplies, they are nothing else but the semiconductor photo-electric cells known for three decades. Their use as power supply would restrict C.D. communications to the hours of sunshine only, as no other light, short perhaps of capital cities in flames, makes them produce sufficient power. Thus dry cells or midget accumulators are the best sources of supply for C.D. equipment.

As to the ground-wave range of this transmitter, with the lower input (1.65 milliwatts, self-contained), distances of up to three miles can be covered without difficulty, proved by reports from 3.5 Mc. stations. The signal is stable and clean. No chirp is noticeable with the lower input; but a slight chirp cannot be avoided with an input of 30 milliwatts. Considering the very unfavourable conditions prevailing whenever tests were made with this transmitter, it can be assumed that much greater distances can be covered in winter time.

The ground-wave range, however, is indicative of the usefulness in Civil Defence. After it has at last been recognised officially that hand-portable equipment is a must for serious C.D. work, the prospects of this transmitter are very promising. With an equally miniaturised transistor receiver (to be described in a future article) the pocket-size communication station is complete.

Handy Coil and Co-ax Data

So you have decided to build up that handy piece of equipment described in "QST" or "CQ." The article says to use two inches of "X" brand coil. What do we do here? It also said to use a "Z" brand coil former, but what about its diameter and winding length? That RG-79/U co-ax they specify is also an unknown quantity. Well here are a few tables that might help out.

B. & W. MINIATURE INDUCTORS

Type	Diam.	T.P.I.	Length
3001	¼"	4	2"
3002	¼"	8	2"
3003	¼"	16	2"
3004	¼"	32	2"
3005	⅜"	4	2"
3006	⅜"	8	2"
3007	⅜"	16	2"
3008	⅜"	32	2"
3009	½"	4	2"
3010	½"	8	2"
3011	½"	16	2"
3012	½"	32	2"
3013	1"	4	3"
3014	1"	8	3"
3015	1"	16	3"
3016	1"	32	3"

B. & W. STANDARD AIR INDUCTORS

Note.—All 10" lengths.

Type	Diam.	T.P.I.	Wire Gauge
3900	2"	8	14
3905-1	2½"	8	12
3906-1	2½"	8	14
3907-1	2"	10	16

NATIONAL PERMEABILITY TUNED COIL FORMERS

Type	Core	Height	Diam
XR-80	brass	1¾"	17/64"
XR-81	iron	1¾"	17/64"
XR-82	brass	1¾"	17/64"
XR-83	iron	1¾"	17/64"
XR-90	brass	1¾"	¼"
XR-91	iron	1¾"	¼"
XR-92	brass	1¾"	¼"
XR-93	iron	1¾"	¼"

NATIONAL JAN-SPEC COIL FORMERS

Type	Height	Diam.	Groove	Core
XR-60	1-13/16" x	1"	yes	iron
XR-61	1-13/16" x	1"	yes	brass
XR-62	1-13/16" x	1"	no	iron
XR-63	1-13/16" x	1"	no	brass
XR-70	1-9/16" x	¾"	yes	iron
XR-71	1-9/16" x	¾"	yes	brass
XR-72	1-9/16" x	¾"	no	iron
XR-73	1-9/16" x	¾"	no	brass

Mica-Filled Bakelite Formers

XR-50	1-51/64" x	⅝"	no	iron
XR-51	1-51/64" x	⅝"	no	brass

AMPHENOL CO-AX R.F. TRANSMISSION LINE

No.	Impedance	Diameter
RG-5/U	52.5 ohms	0.332 inch
RG-5A/U	50 "	0.328 "
RG-6/U	76 "	0.332 "
RG-7/U	90-105 "	0.370 "
RG-8/U	52 "	0.405 "
RG-9/U	51 "	0.420 "
RG-9A/U	51 "	0.420 "
RG-10/U	52 "	0.405 "
RG-11/U	75 "	0.405 "
RG-12/U	75 "	0.405 "
RG-13/U	74 "	0.420 "
RG-14/U	52 "	0.545 "
RG-15/U	76 "	0.545 "
RG-17/U	52 "	0.870 "
RG-18/U	52 "	0.870 "
RG-19/U	52 "	1.120 "
RG-20/U	52 "	1.120 "
RG-21/U	53 "	0.332 "
RG-22/U	95 "	0.405 "
RG-22A/U	95 "	0.420 "
RG-29/U	53.5 "	0.184 "
RG-34/U	71 "	0.625 "
RG-35/U	71 "	0.870 "
RG-54A/U	58 "	0.250 "
RG-55/U	53.5 "	0.206 "
RG-57/U	95 "	0.625 "
RG-58/U	53.5 "	0.195 "
RG-58A/U	50 "	0.195 "
RG-59/U	73 "	0.242 "
RG-62/U	93 "	0.242 "
RG-63/U	125 "	0.405 "
RG-71/U	93 "	0.250 "
RG-74/U	52 "	0.545 "
RG-79/U	125 "	0.405 "
RG-83/U	35 "	0.405 "
RG-89/U	125 "	0.632 "
RG-108/U	76 "	0.230 "
RG-111/U	95 "	0.420 "

SUBSCRIPTIONS

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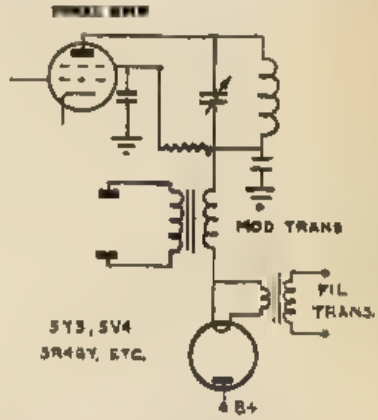
SUBDUE THAT OVER-MODULATION AND INCREASE YOUR READABILITY

BY BUD POUNSETT,* VK2AQJ

Here is a simple, effective method of preventing those negative peaks from annoying the guy on the adjacent channel and also preventing those queer noises your next door neighbor sometimes hears on his b.c. receiver

The components required are one vacuum rectifier and a spare filament winding having adequate insulation. The rectifier, which can be any tube that will pass the current, is inserted in the h.t. line to the final amplifier between the power supply and the cold side of the modulation secondary winding. It is as simple as that and is fully automatic in operation. You just can't go wrong.



The theory is this: On 100 per cent. modulation peaks, the audio voltage increases the final plate voltage to twice the d.c. voltage and decreases it to zero alternatively, if the final is linear. If peaks in excess of 100 per cent. modulation occur, the positive swing just goes up, **but** the negative swing takes the plate voltage into the negative region and that is where the trouble starts, when the plate voltage is going from positive to negative. The rectifier in series with the h.t. line prevents the plate voltage from actually becoming negative. Now you are going to ask, "What about the harmonics that are generated?" The inductance of the secondary of the modulation transformer plus the stray capacitance in the circuit form a low-pass filter that reduces the harmonics to a minimum.

In addition, by now being able to turn up that modulation gain control, you can raise your average modulation percentage quite considerably and increase your readability. For those who would like to hear a practical demonstration, contact VK2AQJ any time on 40, 20, 15 or 10 metres.

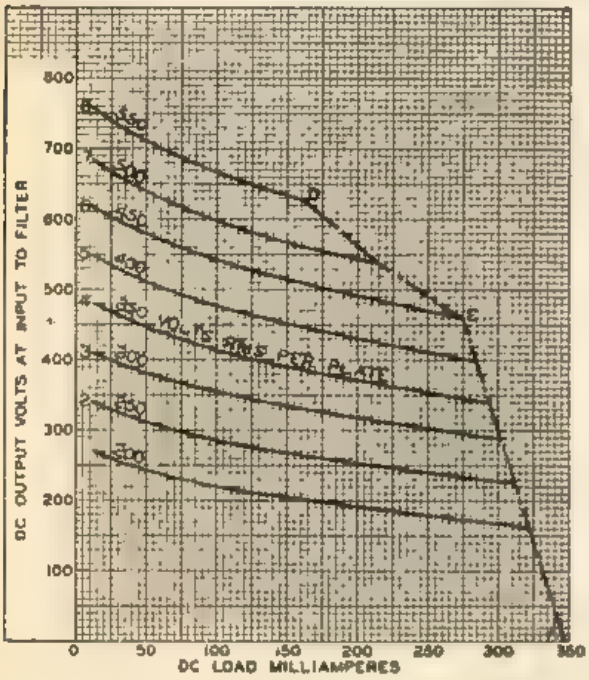
* 04439, Flg. Off. K. B. Pounsett, R.A.A.F., Canberra, A.C.T.

RADIOTRON

TELEVISION VALVE SERIES

The Radiotron 5AS4 is a full-wave vacuum rectifier of the filamentary cathode type intended for use in the power supplies of television receivers and in electronic equipment having high direct current requirements.

The maximum ratings of the 5AS4 allow it to supply, using a capacitor input filter, a direct current load of 300 mA at an output of 290 volts d.c. (input to filter).

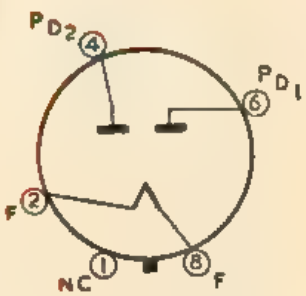


Operation Characteristics—Full-wave circuit, capacitor input to filter = 40μF.

When a capacitor input filter is used, care should be taken to see that the maximum values of both the peak plate current per plate and the hot switching transient plate current per plate are not exceeded. Reference to the rating charts published in the May and September, 1956, issues of Radiotronics will allow the operating conditions for any particular application to be determined. For example, suppose a 5AS4 is to be used in a T.V. receiver with the following low voltage power supply requirements: Filter input capacitance = 40 μF, voltage at input to filter = 300 volts, current drain = 275 mA. The curves show that using a full-wave arrangement for a direct load current of 275 mA, and a direct output voltage of 300 volts, an alternating voltage of about 310 volts r.m.s. per plate will be required.
A check should be made to make sure that the two peak current maxima are not exceeded, using the Rating Charts published in Radiotronics.

5AS4†

PIN CONNECTIONS



(bottom view)

Pin 1—No connection.
Pin 2 Filament
Pin 4—Plate No. 2.
Pin 6—Plate No. 1.
Pin 8—Filament

GENERAL DATA

ELECTRICAL:

FILAMENT VOLTAGE	5 volts a.c. or d.c.
FILAMENT CURRENT	3 amps

MAXIMUM RATINGS:

PEAK INVERSE PLATE VOLTAGE	1550 max volts
STEADY STATE PEAK CURRENT PER PLATE	1.0 max. amp
A.C. PLATE VOLTAGE (R.M.S.) PER PLATE	550 max. volts
TRANSIENT PEAK PLATE CURRENT PER PLATE	4.6 max. amp.

† For further information on the 5AS4 and other Radiotron Television Valves consult the Radiotron TV1 Booklet.

AMALGAMATED WIRELESS VALVE CO PTY. LTD.
47 YORK ST., SYDNEY

VC6-56

B.B.C. (LONDON) TV SIGNALS RECEIVED IN SYDNEY AND MELBOURNE

Norm Burton, of Revesby, an outer suburb of Sydney, is receiving world-wide congratulations on his verification of reception of the London TV sound and vision signals in Sydney. This is believed to be the first time this has been accomplished in Australia.

Norm uses a Hallicrafters SX28 receiver with a vertically polarised antenna similar to those used in England. The tuning range of the SX28 has been modified slightly to allow tuning of the frequencies 41.5 Mc. for sound (amplitude modulation) and 45 Mc. for the vision carrier.

Reception has been over a period and a definite confirmation has been received from the B.B.C. for his reception on 22/12/56. Norm again received the signals on 6/2/57 and rang George Palmer who is a well known s.w.l. in Melbourne. Norm is so impressed with the signals he has heard that he is planning to import a TV receiver from England. He would naturally be very pleased to hear of any other reports of reception and has complete data on programme material and times of operation, etc. There is, of course, every possibility of more, during the present and approaching sunspot conditions.

George Palmer, of Williamstown, a suburb of Melbourne, also heard a test transmission from the B.B.C. Crystal Palace TV station on the channel 1 sound frequency of 41.5 Mc. The signal was first received just after 8 p.m. on 7th February and lasted about an hour. The transmission consisted of a test programme of orchestral music and though conditions were poor, with high noise level, the signals at times peaked sufficiently, enabling the station to be easily identified.

A converter feeding into a communications receiver was used for the test and the signal was received also on an English TV receiver. It was not possible on this occasion to receive the video signal due to the poor conditions and probably the fact that the m.u.f. may not have extended to the video channel on the higher frequency.

George is to be congratulated on his results as this is the first time he has received a signal after efforts on his part which have extended over a year or more.

NINTH ANNUAL URUNGA CONVENTION

This Convention will be held over **Easter week-end, April 19-22,** and it is the organiser's hope that you will do your bit towards making the Convention a success. Naturally it would be best if you could come, but in case you are unable to, your co-operation in the various competitions will be appreciated.

Competitions will be held as usual for 40 metre battery operated equipment, along with an all-band scramble for any gear. V.h.f. enthusiasts can be assured of a good time on 144 Mc. as Crieff VK2XO is right on the job picking out spots for hidden transmitters.

It is hoped that a demonstration of v.h.f. receivers of various types will be given and this should be of great interest, particularly to country operators.

The area is served by train, and the road from Sydney is perfect except for 28 miles of reasonable gravel. A plane service is available to Coff's Harbour and arrangements can be made to pick you up.

Accommodation is available at the Ocean View Hotel, Pilot Guest House, and several of the boarding houses, whilst we can provide stretchers for those who wish to fend for themselves. Tariff figures are approx. 40/- per day at the hotel and 30/- at the Pilot Guest House. A letter to either at the earliest opportunity, enclosing £1 per person deposit, will reserve your accommodation.

Evening entertainment will be available for the ladies and children in the form of films and variety acts.

This is a week-end where you can meet your Ham friends and meet the bloke you're often chewed the rag with. Everyone has a good time at Urunga, so—

DON'T FORGET URUNGA
APRIL 19 TO 22.

—Noel A. Hanson, VK2AHH, Organiser.

"MEET DONALD DUCK"

BY STAN BOURKE,* VK2EL

LET us have a look at this "duck talk" stuff which seems to be gaining in popularity and invading our bands these days. Perhaps one of the best ways to see what lies behind all these unseemly noises would be to see just how and why this "stuff" differs from what some of its users rather rudely call "ancient modulation"—a.m. to us.

Now we all know that, when we plate modulate our good old c.w. rig, we use a more or less powerful audio amplifier to swing our plate voltage between zero and twice the plate supply voltage at an audio rate. So far, so good, but two rather puzzling things happen. First the plate meter remains rock ready (at least in theory) despite the fact that we are pumping a good fifty watts of audio power into our final. **The average carrier of an a.m. transmitter remains constant in amplitude, frequency and phase.** This 50w. of audio must go somewhere. You've guessed it—sidebands.

These things are just a bit puzzling to the newcomer, so let's regard our final stage as a mixer, just like the ones we use in our receivers. We apply two frequencies to this device and out come not only the original frequencies, but their sum and difference too. In our final tank, the r.f. carrier comes out and also the sum and difference frequencies either side of the carrier. The audio we fed in will not be directly radiated, of course. **Here are those missing watts**—in the two sidebands, the sum and difference frequencies either side of the carrier.

In the words of a famous American Amateur "these sidebands are both saying the same thing". If we could by some means wipe out one of them, we would have a signal which would still sound exactly the same on any receiver. There would be just one important difference—the signal would be only half as wide, say 3 Kc., instead of the 6 Kc. necessary for normal speech modulation. This would immediately accommodate twice as many stations in our crowded phone bands, if we could bring our receiver passbands down to 3 Kc. We would lose a little this way, because there is now only one sideband being detected by our receiver, but this would be made up by the chap at the other end, who would put all his eggs into one basket, or all his modulation into one sideband

Now, let's have a look at this carrier. It's a very good carrier and we went to a lot of trouble to get it clean and stable. On c.w. it may do a lot for us—more than any fancy system of modulation, probably. But just why is it called a "carrier"? In the transmitter we looked at earlier (remember it had a mixer in this final stage) it was used to beat against our dulcet tones to produce sidebands. At the receiver our second detector does the same thing in reverse—"hears" the beats between sidebands and this "carrier". Here is the point of all this: **The carrier didn't pick up our sidebands and carry them to that DX station's receiver—the sidebands got there under their own steam** and the carrier just went along for the ride and to beat against our sidebands in his receiver, when it got there.

If the "carrier" doesn't carry anything and doesn't change in any way under modulation, would there be any advantage in forgetting to transmit it? For an answer to this one, listen between 14.3 and 14.2 Mc. some time when that band is wide open to the 'States or listen on 40 metres, say, during the week-end nearest to August 15. These collections of squeals and howls are mainly beats between the carriers or various stations. If we could eliminate all these carrier heterodynes it would certainly be a great help.

At the transmitter it is fairly easy to get rid of this carrier, after we have used it to generate our sidebands, but what will the resulting signal sound like in the receiver? You're right again—it sounds absolutely horrible If you are used to working phone DX you will possibly copy some of it. But, here is the catch! There is no carrier to beat with those sidebands to produce sensible modulation. What we hear is beats between audio frequencies in the voice of the operator, and here is where many of us give up and say that we would need a special receiver to copy that "Donald Duck" stuff.

Well, what use is it? Can we do anything with it? Obviously we must put back this carrier the other chap forgot to transmit. If we receive both sidebands minus carrier, we surely do need a very special receiver, for we must introduce a carrier of exactly the right amplitude, frequency and phase—a very tall order indeed! If only one sideband arrives at our detector the problem is much simpler, all we need is a **stable** receiver with a fairly healthy b.f.o. to provide the missing carrier. The amplitude and phase of this carrier then becomes relatively unimportant and the frequency may be within 100 cycles for readability or about 10 cycles for good quality. Almost any good c.w. receiver worthy of the name can manage this. The second (or "unwanted") sideband could be removed in the receiver, or the transmitting station might also forget to send it along, too. If he does this we have what used to be known as s.s.s.c.—now more commonly called s.s.b.

As this article is meant as an introduction to this queer stuff, we won't delve too deeply into just how s.s.b. is obtained at the transmitter. There are two general systems in use. The first involves removing one sideband by familiar filtering methods, using selective tuned circuits, crystal or mechanical filters. The other method makes use of a rather fascinating system of phasing and balancing to knock out the unwanted sideband. Two rather striking differences you will notice in the schematic of an s.s.b. rig are the absence of frequency multiplication, once the "stuff" is generated, and the use of linear power amplifiers. There have been a number of excellent articles in this magazine describing practical s.s.b. transmitters.

To round this off, let's see what we should do to make sense of this stuff with the old receiver and have a look at the advantages which are claimed for the system.

You will hear most s.s.b. activity in the region around 14.3 Mc. with some activity on other bands and quite a few ZLs around 3.8 Mc. When you hear the signal, first carefully centre the queer noises in the receiver's i.f. passband and back down the r.f. gain control as far as possible, advancing the audio gain as necessary. Do this because the s.s.b. station has put "all his eggs in one basket" and there's a good deal of power in that sideband signal. If you overload anything in the receiver it will sound even worse! Now, turn the b.f.o. on and a.v.c. off. Tune the b.f.o. till the signal sounds as natural as possible, adjusting r.f. gain as necessary. If the signal sounds lacking in highs or lows you may not have it centred in your receiver passband and a little fiddling with the b.f.o. and receiver tuning should fix this.

When you have it right the b.f.o. should be about 1.5 Kc. from the centre frequency of your i.f. passband to allow the 3 Kc. wide sideband to sit in the middle. You can mark this spot on your b.f.o. vernier, leave the b.f.o. set and look for other stations with the main dial. It has become the custom for stations above 10 Mc. to use the upper sideband, whilst below this frequency the lower is used. After an evening's listening you should come up with a mark either side of centre on your b.f.o. control and you are in business.

Some of the things you can do to improve the receiver, if you do get interested are to experiment with the time constant of your a.v.c. system, get the bandwidth down to 3 Kc., and use a product detector. This last gadget uses a mixer instead of the usual diode rectifier and responds only to beats between i.f. signals and your own b.f.o., thus eliminating heterodyne beats between signals. If you get really bitten, you can add a "slicer" which picks out either sideband of any signal. This one may use a sharp filter or phasing system, just as in an s.s.b. transmitter.

These are some of the advantages claimed for the system:

Reduction of bandwidth and heterodyne QRM, with improvement in signal to noise ratio at the receiver.

Effective power gain. To understand this, consider a receiver having 3 Kc. bandwidth, tuned to a 100 watt a.m. signal. There are 150 watts of power in this signal (carrier 100 plus 50 in two sidebands) and our 3 Kc. wide receiver gets one sideband or 25 watts of it. On an s.s.b. signal we can receive a full 100 watts of sideband

(Continued on Page 16)

* 17 Citadell Ave., Canterbury, N.S.W.

FIFTY-SIX MEGACYCLES AND ABOVE

VICTORIA

Members of the V.h.f. Group spent a very delightful evening on the occasion of their January meeting when they availed themselves of the kind hospitality of Mr George Palmer at his home in Williamstown. Mr. Palmer is well known for his superb private theatrette, where, because of his generosity and his very ardent desire to give pleasure to his many friends and acquaintances, he entertains them with programmes of the latest films and television. Members enjoyed very much the excellent programme he had chosen specially for our Group which included a film on the Antarctic, a trip to Coney Island (a really amazing film this one, and which at times seemed almost too realistic for the nervous system), and then a couple of comedies, one a skit on television, and I'm sure the members will laugh over it for many a day. After an interval he showed a brilliant full length feature in colour.

Members were invited to inspect his projection and television equipment, he has several television rx's including a miniature portable set, he is also interested in tape recording and has receiving equipment for h.f. and v.h.f. Of particular interest was a demonstration of his large screen projection television. Here the station programme is projected from the receiver per medium of a special small size picture tube operating at about 25 killovolts and the picture is thrown on to a theatre screen via a small reflecting picture system. This produces a picture of approx. 4 ft. x 3 ft. 6 in., a picture closely resembling a film but which is a much softer picture without any glare. Members then inspected his mast and gazed lengthily and we must admit, with quite a deal of envy at his flood-lit 100 ft. steel tower which supports an array of beams for television and v.h.f. reception. President of the Group, Herb 3JO, passed a vote of thanks at the conclusion of the evening and this was heartily seconded by all present.

At the V.h.f. meeting on March 20 the lecturer will be Les Jenkins, ex-2ZBJ, who will give a lecture entitled f.m. equipment for 144 Mc. He will have his own f.m. equipment on display and an attempt will be made to give a working demonstration. Don't forget the City-Country "Get-together" of the V.h.f. Group to be held on April 17, when it is hoped to have a demonstration of home-built t.v. equipment.

The results of the first V.h.f. Field Day for this season are as follows. First, Reg 3ZAD (portable on Mt. Donna Buang), with 1790 pts., including bonus points for the three longest contacts on 2 mx, all three of which were with Ballarat stations, a distance of 200 miles. Second was John 3ZAI (portable on Pretty Sally Hill) with 966 pts., including bonus points for the three longest contacts on the 1 mx band which were with 3ZAF on Mt. Dandenong (38 miles), 3ZEE on Mt. Dandenong (38 miles), and 3ZAQ at East Malvern (12 miles). Third was Jacques (portable on Mt. Dandenong) with 930 points including bonus points for his contact with the second place winner, 3ZAI, with whom he shares equal honours for one of the long distance contacts on the 1 mx band. Further V.h.f. Field Days on 17th March and 21st April.—Phyl Moncur.

SOUTH AUSTRALIA

This month sees a little more activity than usual. Contest maybe, but generally improved results with some newer calls on the bands; welcome to you new ones, let's hear more from you.

Col 5CJ has completed his 144 Mc. converter which works well; is now active on that band, his sigs being heard by 3NN at Yannac. David 5ZAM was busy with the Contest. Claude 5CH also active on 144 Mc.; his sigs likewise get through to Yannac. Ray 5ZBM now a full member of the Division, welcome Ray and nice to hear you on the band. Bill 5ZAX mobile on 2 mx at Port Arthurton during the holiday week-end and had contacts with 5GB, 5QR and 5EF. Bill advises good receiving conditions over there with a temporay 3 el. beam 20 ft. up. He was 5 x 8 at Gawler and heard the 2 mx relay of 5WI on the Sunday f.b. 2AFM was mobile/portable in S.A. during the Xmas holidays and called his head off many times, finally worked Neil 5ZAW on the last day of his stay!

Some talk of a few boys trying n.b.f.m. and/or p.m. on v.h.f. soon. Know of three who are nearly there, one of them George 5GB has tried n.b.f.m. plus p.m. (or it sounded like that) but is naturally clearing it up. Ern 5EN was heard 5 x 8 on 1 mx to 5GB and later 5 x what you like on 2 mx. Ern uses a 522 into /30 into /40 (leaving out the QQEs) to something else to get 100 watts on 1 mx. All very good, but why not separate the gear a bit Ern and make duplex possible.

Which brings it to a point, now talking about duplex (cross band 2 and 1 mx). Those urgers 5QR, 5GB, 5AX finally talked me into giving 1 mx a go and what it lead to was just nobody's business.—5EF.

(Editor's Note.—Suggest you enquire from Comps. 5EF the trials and tribulations that eventuated during an entire day and night trying to get on 1 mx. Then to completely wind it up, that sweetness in his wife who provides most of the inspiration, sweetly asked, "Wouldn't it be easier to raise Reg on the phone?" Well, I ask you?)

TASMANIA

The 2 mx season for VK3 DX opened up well on Jan. 3 when 7BQ and 7PF worked into Melbourne; 7LZ being absent on holidays and 7GM and 7ZAW now having been lost to VK3 land. The absence of the latter two stations being made up by 7RL who has worked his first VK3. Reg has built a new converter and hopes to work more DX now that his five over five is tuned up. For the rest of January, 7PF, 7LZ, 7BQ and 7RL were active on most nights and worked VK3s on seven nights and heard signals on 13 nights for the month.

The most constant signal was that of 3ALZ with his long yagi. His signal was R5 S7 before any other carriers could be heard. Last year Ian was just another station, so long yagi seems to be the goods.

7LZ has gained two S points by increasing the height of his aerial. 7PF has been trying to remove the last db. of noise from his converter and has eliminated the standing waves from the feeders. 7BQ one night was comparing beams and wondered why one was not so good until he found it was back to front.—7PF.

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"MEET DONALD DUCK"

(Continued from Page 15)

power and beat it against a few milliwatts from our b.f.o.

More readable signal under difficult conditions. There is a marked reduction of flutter and selective fading effects as the local carrier has not had a "rough trip" from the transmitter to your receiver.

Power economy in the transmitter. This one might surprise you, when you count the number of "bottles" in a typical s.s.b. rig and compare them with your a.m. rig. Don't forget to count those in your v.f.o., speech amplifier and modulator too! The saving in power is due to the fact that no carrier has to be transmitted and the final stage has only to handle bursts of r.f. power at an audio rate. It's something like throwing away the r.f. (or carrier generating) part of your rig and just using the modulator!

The use of the linear class AB or class B stages results in much reduced harmonic radiation problems.

Well, that's the story. You will probably find that this "Donald Duck" bloke isn't such a bad fellow, if you go to the trouble to meet him with your receiver. While you are doing it you may be surprised. There are at present well over 60 countries represented on s.s.b. and more are coming on hourly. If the growing list of 40-odd sidewinders in VK find the QRM getting tough after this, they will probably find the author down on the c.w. end! One last thought—if we feed a sine wave audio tone into our s.s.b. rig, guess what comes out—pure c.w. Seems the c.w. gang have been on s.s.b. for years!

S.W.L. SECTION*

States represented this month are VK2, 3, and 4 with, as you will see, a very good roll-up from VK2. This is naturally very encouraging, but we would still like to see a regular roll up from all States each month including, yes, I'll say it again, VK9. So keep those notes coming chaps and let's make this page really worth while. So now to business.

NEW SOUTH WALES

Stan Abbey from Coolamon sends a very newsy letter. He tells of two more contributors this month. The first is F. H. Comfort, of Wahroonga, N.S.W., from whom I have also received a letter. This listener has written previously, but evidently his letter went astray. He is using a 6 valve rx with no r.f. stage, whilst the antenna is a single length of wire. Judging by the list of stations included he is doing quite well as those logged include TI-2LA, W, IICID, TI2HF, FK8AO, TG9TU, JA, KA, GM3HFD, VK9, DL3, KR6, VS2FD, JZ0PC. Thanks very much for your letter and we are looking forward to hearing more from you. Another new name to appear in the notes is that of Maurice Logan, from Wagga Wagga. Maurice, however, does not spend much time there as he has been attending the University and just recently gained his B.Sc. As Maurice is only 20 years of age, this is a really fine effort and congrats are due. His present projects include conversion of an AR301 to receive the sound components of TV signals, building a sweep generator and c.r.o. However, his s.w.l'ing future is in doubt for some time as he will be staying in Sydney and has yet to sound out the landlord as far as such matters are concerned. Let's know how you go Maurice.

It appears that we may soon be providing another addition to the ranks of licensed Amateurs. Bill Davey, of Paddington, has passed his exams. in regulations and c.w., but only received marks of 63 per cent. in theory. However, still not daunted by any means, he's having another try and has perhaps even by now gained that ticket. He now has an AR7 making a total of four rx's, which together with a 2 el. 20 mx beam, must make a very impressive receiving set-up. Don't forget to tell us more about your activities, too, Bill.

Belated congrats. must go to Jack Ashley, who became the proud father of a bouncing baby boy on Christmas day last. Stan himself tells us he hasn't gone "mobile" s.w.l'ing in his car yet, but we'll give him time. Stan also asks if there are any s.w.l's. in Griffith as there is a fairly large club there.

VICTORIA

Orbost is kept in the news again this month by Dave Jenkins. He has now disconnected the a.v.c. and S meter circuits of his new rx and is working on the xtal filter. The S meter circuit drags a fair bit of current and drops the h.t. to one of the i.f. amplifiers by about 5v. As Dave has to use dry batteries, he is somewhat limited in his construction work. A converter covering 21 and 14 Mc. will probably be his next job, after the rx is working properly.

January Group Meeting.—The first meeting of the VK3 Group for 1957 was very successful. 14 members were present including three new members. They were Maurice Core, of Ferntree Gully, George Fox, of Glen Iris, and David Matthews, of Camberwell. Pleased to see you along chaps and hope you continue coming to the meetings.

Our President, Ian Poynter, began the meeting with a very interesting talk introducing short wave listening for the benefit of newer and younger members. The meeting finished with a question and answer session. This proved enjoyable to all and the variety of questions asked was astonishing. Congrats. are due to George Robertson (3WJ) who has just recently passed the A.O.C.P. exam. George is the first member of the Group to receive the full licence, but there are at least four others with their A.O.L.C.P.

S.W.L. PROMOTES V.H.F. DX CONTACT

A young member of the VK3 Group, Raymond Bedson, WIA-L3008, was recently instrumental in bringing about a VK2-VK3 contact on the 56 Mc. band. Raymond, who by the way is a blind lad, was using a turnstile antenna, co-ax fed and a converter before his AR7 rx. He heard 2ATS calling CQ on the band with very good signals and immediately rang one of the Melbourne v.h.f. gang. However by the time the VK3 station came on the air, VK2 was QRT. Later Raymond heard 2ATS again and the procedure was repeated, this time with a contact resulting. Other QSOs then followed. A fine effort on your part Raymond, and congrats to you also. This is one of the many ways in which s.w.l's. can aid licenced Hams. If you think we can help you contact the Secretary of the S.w.l. Group, Ian Hunt, at the address shown below or ring him at FB 0261, Ext. 305, during working hours. We can monitor transmissions, aid in checking h.c.i., give reports, listen for any station you wish and assist in erecting antennae. Also, if you can help us by giving a lecture at one of our meetings or allowing a small party to visit your shack, let us know.

S.W.L. 100 CERTIFICATE

Warren Moulton, WIA-L3020, was presented with the second S.W.L. 100 Award at the Feb. general meeting of the Vic. Division. Congrats. on your effort, Warren. Any more tryers for this award? It's worth having. Requirements for this Certificate are detailed in the October issue of "Amateur Radio," page 16, and in the W.I.A. Call Book.

QUEENSLAND

Don Bryant, of Taringa, Qld., again writes to this page telling of his latest doings. He was unluckily in a bad car smash, but is getting back on his feet now. Hope everything is quite OK again soon Don. He has a folded dipole up in the air now and it's working out well. A few QSL cards have begun rolling in and Don hopes they continue to arrive. Among the stations heard by him lately are IIBFS, KW6CM, KJ6BR, KH6, VS-6NS, W, K, DL4SK, VP2DA, G3, KP4FL, XE, ZS8, ON4, ZS1, VE, FU8 and YS4JG. Let's hear from you next month, too, Don.

* Compiled by Ian J. Hunt, WIA-L3007, 211 St. George's Road, Northcote, N.16, Vic.

YL CORNER

BY PHYL MONCUR

This month we have another article from Lesley Fullagar, you'll all remember her very amusing one some months back. This time she gives us her impressions of what a QSO between two XYLs would sound like.

CQ, CQ, CQ. This is XYL-One calling CQ 20 metres. XYL-One is calling and listening. XYL-All. XYL-All. XYL-One returning. Thank you for your call. You are coming through loud and clear. The handle here is Joan—Jig, Oboe, Able, Nan. The rig is the OMs, and the antenna is a temporary hay-wire dipole, till the OM finishes putting up the new rotary beam. What's the news from you? Everything goes on much the same this end. The DX was coming through well yesterday evening, so of course it was a case of taking the OM's dinner into the shack again.

Why must they call it a shack? It's a good enough name when that's all it is, but take Eileen's case, for example; she does more than any XYL should be asked to, I say—lets the rig be set up in the living room! That's far from being a shack, she has it so beautifully furnished. Of course her OM does his best to make it look like one, with his trailing wires, coils, switches, tubes, resistors, and goodness knows what else, all anyhow! What is it about Ham Radio that makes even an otherwise tidy man get his shack in such a state?

Had a bad day today. The children were home from school, of course, being Saturday, and there were ant-stings, and cut fingers, and quarrels, and baby's nappies to be changed —just one little thing after another, while I was trying to get lunch ready, too. Finally I'd had all I could take, so I put my head around the shack door to ask for the OM's help. You can guess what happened; a lot of hand-flapping to be quiet because he was in QSO! I went out in disgust. — QRX one. . . . Here I am back again; the OM was calling me. Then after lunch I wanted to do a bit of sewing—I've such a lot to do, as the children all seem to be growing out of their clothes at once. Yes, you've guessed it! Would I kindly stop as the machine QRM was ruining reception?!!

For all that, I must confess I get quite a kick out of listening in when I get a chance. It's wonderful what good friendships can be made with other Hams and their XYLs, though you've never seen them, and in the case of the DX ones, are never likely to see them! I can imagine, too, how much I'd depend on Ham Radio for companionship if I were one of the American wives stationed with their men on lonely little islands like Guam.

Another good thing about it—whatever the disadvantages of the hobby, it keeps our OMs at home where we know they're not getting up to mischief!

Must go now, the OM is calling me again to help him with that beam tower. I daren't keep him waiting any longer. You know how it is—yet how many times do we have to call them to come to a meal?

73 for now. Hope CUAGN soon!

XYL-One is off and clear with XYL-All, and XYL-One is going QRT.

★

Get well wishes are extended to Joan, Mrs. VK3WJ, who has been very ill for several weeks and who now has quite a long convalescent period ahead of her. Been in bed with the doctor she has, poor dear. Now don't laugh, because it's been absolutely terrible for her. Anyway, Joan, I believe you've got a lovely slim little figure after your illness so that's something to make you happy and on behalf of all XYLs I wish you a speedy recovery.

A bird whispered to me (a stork it was) that he is going to call on Jan, Mrs. VK5EN, shortly, good luck Jan. Believe you've got some ideas for our column, well now about starting on an article while you're in hospital, you could do it in between feeding times.

DX ACTIVITY BY VK3AHH†

PROPAGATION REPORT

3.5 Mc—Several reports refer to this band. A station in **South-East-Asia** was audible around 1400z and **European** signals showed up around 1800-2000z.

7 Mc.—Apart from regular openings to **North America** between 0730z and 1330z, **Africa** and **Europe** were represented, 1730-2100z.

14 Mc.—During the month all continents were workable, although some reports mention an apparent deterioration of conditions. Openings were frequently found to overlap and definite times cannot be given.

21 Mc.—Similarly, conditions on this band do not allow to define actual times of openings. General conditions were not very reliable.

28 Mc. This band opened to **North America** and **Europe** at the usual times.

NEWS AND NOTES

According to John W6YY, **Aland Island**, with OH2HO/0, OH3RA/0, OH1RT/0, and OH1ST/0 will count as a separate country as from 1st March (for the A.R.R.L. DXCC, presumably).

New stations in **Dutch New Guinea** have made the following QSL arrangements: **JZ0PA** via VK6MK, **JZ0PB** see QTHs, and **JZ0PC** via VK5AB (from 5AB).

VS1GX is looking for VK contacts on 3.5 Mc. (from 2AMB).

CR4AS is on 21232 Kc., phone (from W6YY).

QTHs OF INTEREST
(from W6YY VK3AB, BERS186 and Rod de Balfour)

ET3RL—P.O. Box 399, Addis Ababa, Ethiopia.
JZ0PB—C/o Naval Post Office, Biak, Netherlands New Guinea
VR3F—Via R.S.G.B.
CE3ZO—Jim Kirk (ex-G8ZO), P.O. Box 444, Santiago, Chile.
Ex-VK1VH—F. van Hulssen, 16 St. Georges Crescent, Ashburton, Vic.
XE1RM—J. Adolfo Romero C., Circumvalacion 46, Colonia Popular, Guadalajara, Jalisco, Mexico.
ZS9Q—Derek Taylor, Box 7, Francistown, Bechuanaland, S.A.
FF8AP—P.O. Box 6020, Dakar, Senegal, French West Africa
VS4JT—Miri, Sarawak, Borneo.

ACTIVITIES

3.5 Mc.—Frank 2QL contributes the following: UB5KBA, OK3KAH, HB9, DJ1HC, DJ2UK DJ1EB, OK1KAD. Laurie 2AMB heard VS1GX

7 Mc.—2QL reports VP2AH*, ZD6BX*, OQ-5RU*, G*, VQ2GW*, VQ4AQ*, and ZS, LZ1AN, ZC4CH, DL, OK, DU7SV and JA. 2AMB follows with ZS9AJH*, ZD6BX*, VQ2GW*, VS-1GX*, VS2EP*, SM5BLO*, SM5CXF*, 3W8AA*, and 9S4BM. VS5FY, VS5PM, F8VJ, VQ8AD, VQ8AE, HB9KB, KR6QW, YU1FMN, SM5GTI. YU2BQR, HL1AC, VQ4CC. Neville 2APL keyed with K4AQL/KG6* and spoke to JA1QM*. Bud 2AQJ contributes W7VZS* on phone. 2AMB worked HL1AC*

14 Mc. C.W. 2QL VQ2GR*, ZD6BX*, VQ-4AQ*, VQ6LQ*, ST2NG*. Harry 2YL· ZK1AB*, MP4BBE*, JA*, HB9*, CR7AD*, YV5DE*, KP-4VUH*, ZC4GT*, EA*, UA0*, CR7FC*, YV5HL*, YU*, PY1ABS* Graham 2AGH· FY7YF*, FG-7XC*. 2AMB VP2AD*, VP9CX*, BV1US*, KP4AW*, VQ4AQ*, 4S7MR*, ZD6BX*, HC1KD*, TI2DL*, and CR8AH. VQ2RC, UQ2AB, VS-1HC, OH, UO5AA, CR8AI, CR10AA, ZC4GT, YA1AM 2AQJ UA0KJA* UA0KCA*. Frank 8FC ZS0*, VQ6LQ*, ZB1*, I5RAM*, ET2*, SM*, YV5*, ZS2*, 4X4*, HR1EZ* Doug 5AB· LZ1KPC*, OE*, VP2LU* VP5BL*, KP4AGR*, UR2AK*, VP4*, FQ8*, LU3*, ZD*, ZD2*, VU3*, OA3*, VP6*, VR3B* John 5HI. ZC4AA*, ZC-4GM* Ray 5RK 4S7LJ* Col 7LZ· YA1AM*, UA6AI*, CE3RE*, LU7CD*, YV5HL*, LZ1KNB*, VS1HC* Eric BERS195 AP2RH, CE3DZ, CR-7AD, DU8JO, IS1FIC, MP4BBE, VQ2JN. VQ-4AQ. VO1D, VR3B, ZC4IP, ZD6BX, ZS6R, 4S7MR, OK4YI/MM. Dave WIA-L3039: KP-4URO, VP5BL, UA0CD, PA, OH, YA1AM, UA-3KAH, VU2JG, DM, G, DL, ON, SL, VS3FF, YV5HL, OK, SM LA, 4S7MR, PA0AG, DU1CV, AP2RH, 4S7WP, UB5KBA, VS1GZ, UA0KJA, UA0KKB, VP2LU, VS1GX, HB9, KP4ZC, SP, UR2AK, YV5DE, CE3DZ, VR3B. Rod de Balfour: CN8FB, XZ2OM, G, VQ4DT. 2AHH VQ-6LQ*, G*, JA*, HB9*, DL*.

14 Mc. A.M. 2YL: ET3RL* 2AGH: HR1EZ*, KC4USA*, 4X4BO*, OZ5*, TG9AD*, FUBAC*, 5A1TA*, HR1VS*, UA0KJA*, UA0KAE*, LU-8XA*, UH8KAA*, UA9IB*, OQ0DZ*, VQ2BU*, YU*, HB9* Bram 5AB. VS6BE*, VS4JT*, G*, JA*, OE*, DL*, DJ*, YV5*, KP4ZC*, F*, I*, EA8BB*, EA* 5HI VP1PS* VP1JH*, LZ-1WD*, UB5UW*, TI2ET*, XE1CW*, 5A3TH*, XE1VW*, EA8BX*, TI2OE*, KZ5DX*, K3NAK/VO2*, KP4ZW*, HK3FV*, KL7BEW* Rod de Balfour EA7DT, EA, DL, F, I, CT, G, GM, OH, GW, HB9, LA, 5A1TA, 5A1TL, 5A1TV, CN8AB, CN8PJ, CN8BD, SU1AS, ET2US, FA-9IB. EA8BB, FF8AP, ZS6AJX, 3V8AS. 4X4HK, 4X4DK, OD5CY, OD5BX, AP2U, VU2BK, VU-2AK, VU2AT, VS1, VS2, HZ1AB, HZ1TA, 4S7YL, 4S7TS, VS4JT VR3F, KA, JA, XW8AC, XE2NF, XE1BW, XE1RE, TG9AL, TG9AF, TG9MQ, TI2RO, TI2HP, KP4WLU, KP4VA, VP2DT, VP9DC, KZ5DX, HR1EZ, HP3FL, YS-1MS, HH2JK, HH1HB, YV1AG, YV3BH, YV-5BQ, CE2CO, LU7MAL.

14 Mc. S.S.B.—Only one report has been received this month, from Rod de Balfour· SM-5AQV, OH3OJ, HB9FU, DJ1ML, DL4AI, HL0, G3YOO, BV1US, HZ1AB, HR2WC KR6AF.

21 Mc.—2QL. KP4ADS*, ZS*, VQ4AQ*, HC-7WK*, MP4BBE*, DL*, G*, ON*, OH*, PA*, UA1*, YO*, 3W8AA*, and YN1AA, LU, AP2RH, PJ1AV 2YL· LZ1KNB*, G*, JA*, GM*, SM*, YO*, DL*, SP* UB5KIA*, VS4BO*, KV4BB*, ZS4PH* 2AGH ZS1JU*, GD3GMH*, OH*, VQ8GE*, OD6LX*, FA9VN*, EI*, UB5WF*, HZ1AB*, CR9AH*, BV1US*, VS4BO*, JZ0PC*. 2AMB ZS6DL*, ZS5U*, ZS6R*, OZ*, KP4ADS*, DL*, GM*, G*, OE*, and ZS4KH 2APL· DL*, G*, JA*, 3W8AA* 2AQJ JZ0PC*, JA*, 3W-8AA*, HR1LW*, F*, ON*, VS4BO* 5AB· KZ-5DX*, ZS5CP*, ZS*, VU2RC*, JZ0PC*, JZ-0PB*, JA*, G*, FO8AD*, DL*, DJ* VP6ZX*, VP6WR*, VS6CO*, MP4BBF*, YN1PM*, GM*, I*, TG9WB*, LU9DAH*, KL7ALZ* 5BY KP4*, UA3*, GM*, LU3* SM* 7LZ EI*, G*, DL* WIA-L3039: G, CE3ZO, F, OH, 3W8AA. Rod de Balfour OH, SM, LA, G, F, DJ, DL, TF-2WBT, LX1DC, PA, GM, UA4, SP, ON, I, BV1AE, 4S7YL, 4S7GD, OD6AV, VU2EJ, VU-2RC, XZ2OM, VS6, VS2, BV1US, KA, CR8AL, CR9AH VS4NW, S4JT JZ0PB JZ0PC VP-1KE, VP5EM, VP9EW, KV4DB, KZ5DK, KZ5FC, KP4ADX, KP4AZ, HR1LW, W4YPP/KL7

28 Mc.—Only two reports have been received, from 2QL: W*, LA* and OH, and Rod de Balfour· VE, KL7BJC, W.

Rare QSLs have been received by· 2QL: VP5DC, 2AMB VP2DJ, CE3HL, HB1MX/HE, EA8BF, VK9TW, ZS9R, VQ6LQ, HR1EZ, HC-2BH 7LZ: VR3D, HK1DZ, XW8AC BERS195· CE3ZO, CN8FD, UR1KAA, VK1VH, VQ2GW, XE1RM, ZE3JO, ZS9Q. Rod de Balfour: VR3D, XW8AC.

Thanks to W6YY, and the Northern California DX Club, and VKs 2QL, 2YL, 2AGH, 2AMB, 2APL, 2AQJ, 2YC, 5AB, 5RK (QSP 5BY, 5HI), and BERS195, WIA-L3039, Rod de Balfour (QSP 7LZ).

It is with some regret that I now have to discontinue writing the DX column. At the time of writing, I am hurriedly preparing an overseas trip for family reasons. Additional duties during the International Geophysical Year will not leave me much opportunity for Amateur Radio.

Under the circumstances, I am indebted to Frank **VK2QL** for agreeing to continue this column, at very short notice. Frank needs no introduction to you. He has been a consistent contributor to this page, is an experienced DXer, an excellent c.w. operator, and a good DX-editor. After all, it was VK2QL (ex-VK4QL) who established this column some years ago, until VK7RK took over in November, 1952. Since October, 1953, I have tried my pen on this page. Admittedly, it involved a bit of work but I enjoyed it immensely, and hope that readers were satisfied with all of my forty-one issues of the column. Frank will take over as from next month. Reports have to reach him, at **30 Abbotsford Road, Homebush, N.S.W., by the last day of the month.**

I cannot conclude my last column, at least for some time, without a word of appreciation for the co-operation I have experienced during my term of office. With the consistent support of old and young DXers, of Federal and Divisional office-bearers, and the Publications Committee, it was a great pleasure to compile this page. Thank you and please do the same for Frank! OK, friends, when time permits, see you on the low end!

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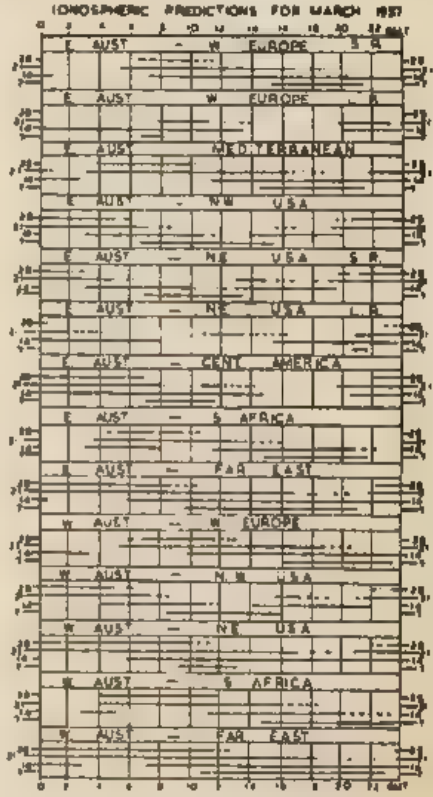
ERRATUM

An error appears in the circuit of the "Clamp Tube Modulation" article (Dec. '56, page 7, column 3). The corrected circuit will appear in the next issue.



† Hans J. Albrecht, 10 Belgravia Ave., Box Hill North, E.12, Vic.
* Call signs and prefixes worked.
z—zero time—G.M.T.

FEDERAL, QSL, and DIVISIONAL NOTES

FEDERAL

Fed. President: W. T. S. Mitchell, VK3UM.
Fed. Secretary: L. D. Bowie, VK3DU, Box 2611W, G.P.O., Melbourne.
QSL Bureau R. E. Jones, VK3RJ, 23 Landale Street, Box Hill, E.11, Vic.
Awards Manager A. G. Weynton, VK3XU, 5 York Street, Bonbeach, Vic.

NEW SOUTH WALES

President Jim Corbin, VK2YC.
Correspondence Secretary H. King, VK2ASU, 19 St. Pauls Road, Balgowlah, N.S.W.
Meeting Night Fourth Friday of each month at Science House, Gloucester Street, Sydney.
Divisional Sub-Editor: Stan Bourke, VK2EL, 17 Clisdell Ave., Canterbury.
QSL Bureau: J. B. Corbin, VK2YC, Box 1724, G.P.O., Sydney (Inwards and Outwards).
Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK2AHH, Ryan Ave., West Kempsey, Newcastle. Les Sparke, VK2AOR, 18 Kahibah Rd., Highfields, via Adamstown, Coalfields and Lakes H. Hawkins, VK2YL, 9 Comfort Av., Cessnock, Western W. Stitt, VK2WH, "Cambijowa," Forbes, South Coast & Southern: E. Fisher, VK2DY, 2 Oxlade St., Warrawong; 8th. Western: J. W. S. Edge, VK2AJO, Wallace St., Coolamon; Tamworth F. W. Fowler, 4 Thompson Crescent, Tamworth.

VICTORIA

President: G. Dennis, VK3TF.
Secretary: F. G. Ball, VK3YB.
Administrative Secretary: Mrs. May, C.O.R. House, 191 Queen St., Melbourne.
Meeting Night: First Wednesday of each month at the Radio School, Royal Melbourne Technical College.
Divisional Sub-Editor: Phyl Moncur, 235 Union Road, Ascot Vale.
QSL Bureau: Inwards and Outwards—W.I.A., 191 Queen St., Melbourne, C.1, Vic.
Zone Correspondents. Central Western: W. J. Kinsella, VK3AKW, Magdala, Lubeck; South Western W. Wines, 45 Cranley St., Warrnambool, and W. Zimmer, VK3AWZ, 70 Skene St., Newtown, North Eastern L. Eliason, VK3ALE, 72 Orr St., Shepparton; Far North Western: M. Folie, VK3GZ, 101 Lemon Ave., Mildura; Eastern: J. Spark, VK3AJK, 20 Marshall Ave., Moe, North Western: C. Case, VK3ACE, Cumming Ave., Birchip.

QUEENSLAND

President. Frank Bond, VK4ZM.
Secretary: W. J. Rafter, VK4PR, Box 636J, G.P.O., Brisbane.
Meeting Night: Fourth Friday in each month at the State Service Union Rooms, Elizabeth Street, Brisbane.
Divisional Sub-Editors: F. B. Bond, VK4ZM, and W. J. Rafter, VK4PR.
QSL Bureau: Inwards—J. Files, VK4JF, Wanda St., Buranda; Outwards—Miss Clair O'Brien, 93 Jardine St., Stafford.
Zone Correspondents: Maryborough: R. J. Glassop, VK4BG, 80 North St., Maryborough, Townsville: R. K. Wilson, VK4RW, Hogan St., Stuart, Townsville.

SOUTH AUSTRALIA

President: W. J. Bulling, VK5KX.
Secretary: B. W. Austin, VK5CA, Box 1234K, G.P.O., Adelaide. Telephone UX 2621.
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Divisional Sub-Editor: E. C. Daw, VK5EF, P.O. Box 44, Gawler, S.A.
QSL Bureau: Geo Luxton, VK5RX, 27 Belair Rd., West Mitcham, S.A. (Inwards and Outwards).

WESTERN AUSTRALIA

President. J. E. Rumble, VK6RU.
Secretary. J. R. Elms, VK6BE, Box N1002, G.P.O., Perth, W.A.
Meeting Place: Perth Technical College Annexe, Mounts Bay Road, Perth.
Meeting Night: Third Tuesday of the month.
Divisional Sub-Editor: E. J. R. Cowles, VK6EJ, P.O. Box 11, Bencubbin, W.A.
QSL Bureau: Jim Rumble, VK6RU, Box F319, G.P.O., Perth, W.A. (Inwards and Outwards).

TASMANIA

President: F. J. Evans, VK7FJ.
Secretary: M. Hurburgh, VK7MH, Box 371B, G.P.O., Hobart.
Meeting Night First Wednesday of each month at the W.I.A. Club Room, 147 Liverpool St., Hobart
Divisional Sub-Editor. H. J. Bracken, VK7BR, C/o. P.O., Bronte Park.
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Zone Correspondents: Northern: K. J. Briggs, VK7LX, 18 Melbourne St., Launceston; North Western: S. H. Pattison, VK7UW, 30 Mark St., Burnie., Tas.

PAPUA—NEW GUINEA

President: W. C. Gee, VK9WG.
Secretary: H. S. Young, VK9AMZ, C/o. P. & T. Dept., Port Moresby.
QSL Bureau. R. Lloyd, VK9ZAL, C/o. Commonwealth Dept. Works, Port Moresby.

FEDERAL

FOUR METRE BAND IN GREAT BRITAIN

An interesting piece of news from Great Britain is that British Amateurs have been granted permission to use portion of the 70 Mc. band To quote the R.S.G.B. "Bulletin":

"The 4 metre band (70.2 to 70.4 Mc.) is a most welcome addition to the British Amateur's v.h.f. allocations. It is in a part of the spectrum where very interesting results may be achieved, particularly in the way of DX, with every possibility of the m.u.f. going much higher The band also promises to be of considerable interest for mobile use."

French Amateurs have had the use of this band for some time and have had excellent results. Their record distance stands at just under 1000 miles.

FEDERAL [illegible]

From VK5 Division comes the news that Mr. G. Bowen, VK5XU, has been re-appointed as Federal Councillor Those members who listen to the W.I.A. broadcasts will be familiar with Gordon's cheery voice telling the VK5 story to all and sundry. He is also most active with the operations of the Federal Contest Committee and will be attending the Federal Convention in Melbourne at Easter.

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FEDERAL QSL BUREAU

Lincoln Lindley, the operator of VK5YL, wishes it to be known that he is a "mere male," and not a female, as the call suggests. Lin, in a recent QSL, advises that he is on temporary duty in "VK" with the R.A.F. and that he will be returning to "G" land shortly, where he hopes to work VK stations from his home call of G3KFA. He requests outstanding QSLs from VK stations be forwarded to him before he leaves for home (direct or via the W.I.A. Bureau).

The 1957 French Contest is scheduled for c.w. from March 2, 1200 G.M.T., to March 3, 2400 hours, and for phone from April 13 to 14, same G.M.T. This is an opportunity for working French Provinces (D.P.F. award) and French Union Countries (D.U.F award) Code is RST (c.w.) or RS (phone), and the number of the QSO (e.g. 579014). A French station identifies one's REF Section by ciphers, and province or country by letters, which are sent after the call when the prefix is not sufficient for identification: e.g. FBDU/15/IF for 15th REF Sections and Province DPF: Ile de France. FA5BG/OR for REF Section of Oran (in Algeria) FQ8AG/MC for DUF country of Moyen Congo in French Equatorial Africa (AEF) For French Union stations (FF-FQ-FB-FO-etc.) please answer 10 Kc. from the frequency of the station. Send the copy of the log to REF, P.O. Box 42-01, Paris R.P. These logs are usable for application to DPF and DUF without any forwarding of QSLs.

FO8AP/MM 30.XII. 66° South 31.06 West 144.12.

The R.E.F has been commissioned to edit a three color map of the itinerary of the Tahiti-Nui. This map will be sent upon request by writing to R.E.F., B.P. 42-01, Paris R.P., France, and including 480 francs, or 10 I.R.C's. The map will permit pin-pointing of the Tahiti-Nui's positions after a contact, a reception, or indications from press services. After the raft will have arrived in Valparaiso, those holding maps will be able to send them to R.E.F The dated positions, as recorded on these maps, will then be verified and sent back to the owner without cost and with the confirming signatures of the expedition members certifying that the holder has taken an active part in this modern Polynesian expedition.

—Ray Jones, VK3RJ, Manager.

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FEDERAL AWARDS

Members are reminded that the return of cards by registered mail can only be undertaken if sufficient postage is sent at the time of application.

W.A.V.E.C.A. AWARD

Certificates have been issued to the following: W. G. Herd, W6CTL; V Kott, OK1FF; J. Hyska, OK1HI; H. Anderson, SM5LL; L. Gregg, W9IU, and R. W. Chronic, W7CSW. Total certificates issued to date, 51.

—G. Weynton, VK3XU, Awards Manager.

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NEW SOUTH WALES

The big news for this month is the New South Wales Division's Seventh Annual Hamfest, held over the Australia Day week-end in January. Proceedings commenced with the monthly meeting of the Division at the usual meeting place on Friday Jan. 25, continued at Brighton-le-Sands on the Saturday afternoon and evening, and concluded on the Sunday with a get-together and auction at VK2WI, Dural. All sessions were very well attended and a good roll-up of country visitors from most zones was very pleasing. Honours go to the South Western Zone for the largest representation.

At the meeting Mr. Graham McDonald, of Philips Electrical Industries, gave a most interesting lecture on the subject of "Transistors." Mr. McDonald did such an excellent job of explaining the mysteries in the operation of these interesting little "gadgets" and the circuitry associated with them, that a rash of transistor experiments will probably follow in his State. The vote of thanks was moved by Don 2ABW, who was responsible for what was probably the first transistor QSOs in Australia. These took place in the 3.5 Mc. band and signals were heard 300 miles distant (input 40 milliwatts!) Don now has his sights set for a QSO with one of the keen W stations!

On the Saturday the gathering heard (and saw) a number of fine lectures. Ed 2EN and Vince 2YC displayed two home-built 17 inch TV receivers and demonstrated the use of TV test equipment in the alignment and adjustment of the receivers. The i.f. band-pass was shown and the waveforms of the various pulses demonstrated. Barry 2ZAQ displayed and demonstrated two very neatly constructed Standing Wave Bridges for Co-ax Lines and described their construction and operation. Barry also gave many of those present their first sight of u.h.f. equipment, when he demonstrated his power tripler stage for the 1215 Mc. band

After tea Bert 2ABB introduced some of the newer television tubes and suggested some of their possible applications in Amateur equipment. When some of these become more plentiful they should make possible some very small and efficient pieces of equipment. Harry 2AJZ, deputising for Leo 2AC, described the "Monimatch"—a very useful device which not only measures the standing waves on your feeder, but is left in circuit continuously acting as an excellent indicator for tuning up and a constant "watchdog" on the antenna system. (It is hoped to reprint from "QST" the "Monimatch" next month.—Ed.) The evening concluded with some interesting films, followed by the usual late ragchews. Some idea of the prizes won and carried off in the various competitions can be gained from the following list of firms supporting the function with donations: Mullard-Aust., Ducon Condenser Ltd., Lawrence & Hanson, Bambach, W. McLellan, George Brown & Co., U.R.D., U.C.C., Philips Electrical Industries, O. T. Lempriere & Co., VK2AHP, VK2EN.

SILENT KEY

It is with deep regret that we record the passing of:—

VK3FP—Don Birkitt. 16/1/57.

Perhaps the most gratifying event of the whole Hamfest was the great roll-up at VK-2WI's location at Dural. A total of over 80 cars was counted and the gathering of well over 100 kept the auctioneers, 2ABU and 2FH, with their assistant Harry 2AJZ, very busy indeed. The relaxation of the "fires in the open" ban and the very generous donation by Harry 2AHP resulted in a very fine barbecue and a large quantity of chops and sausages were dispensed very quickly. Favourable comments on the building and location were heard from all quarters. A couple of roll-ups like this one and all the finishing touches to the building and grounds could be completed without any trouble.

Space will not permit thanks to be extended individually to all who worked so hard to make the Hamfest such a great success, but special thanks are due to the Council of the Division for their untiring efforts, to the manufacturers and members who assisted so generously with donations, and to the ladies who toiled so hard under difficulties in the kitchen. Here's hoping to see YOU at the next Divisional Hamfest.

HUNTER BRANCH

No meeting of the Hunter Branch was held in January as the Branch was in recess for the holiday period. Activity by the Amateurs in the district over the last month was not very great. Main activity centred on 7 and 14 Mc with 2CN, 2SF, 2ZL, 2AOR, 2AFA, 2CS, 2XY and 2AQR being the most frequently heard. Bill 2ZL has been most active and his new modulator sounds f.b. Bill also has his Super-Pro rx working well, but he admits he can't play billiards. Bob 2AQR has been back on xtal due to trouble with his v.f.o. Harry 2AFA heard demonstrating 20 mx phone DX for visitors. Harry had the usual visitor's luck. Jim 2AHT has been working 10 mx DX; he may not have so much free time shortly. John 2XQ, Johnny 2DZ and Bill 2XT have all been on holidays. Johnny went to Coffs Harbour and Bill to Katoomba. Neil 2XY recently became the proud father of a 2nd op., hope he doesn't cause as much QRM as his old man. Norm 2ANA has no antenna at present due to his feeders snapping off in the last storm. Les 2AOR now possesses a "one-eyed monster" which displays some peculiar patterns when Les switches on his tx. Bill 2XT has come into possession of a small compact converter which he intends to put to use as part of a mobile rig. Hylton ZL2MN paid a brief visit to Newcastle where he met Neil 2XY, Bill 2XT and Les 2AOR. He stayed overnight at 2AOR's and was shown the sights of the city by courtesy of 2XT.

A TV lecture and demonstration was held during the month at the University of Technology, to which Hunter Branch members were invited and a number did avail themselves of this offer.

Our next meeting will be held at the University of Technology, Tighes Hill, on Friday, 8th March, at 8 p.m. As this is our Annual General Meeting whereat the Branch officers for the ensuing year will be elected, all members are especially requested to note the date and time and make every effort to attend.

Don't forget to listen for 2AWX, the Hunter Branch station, every Monday night at 8 p.m. on or about 14.3 Mc, for the latest information on Hunter Branch activity.

SOUTH WESTERN ZONE

Very pleased at the roll-up of zone members at the State Hamfest; a total of nine Hams and Associates from Griffith, two from Tumut, and one from Coolamon. Thanks chaps for making the effort, although we of this zone have always shown we are not afraid to travel to Conventions and such. I am sure all the zone members who were at Dural will agree with me that Council and others have done a mighty fine job in the building of 2WI. When the building is completed and tx's and rx's installed, it will certainly be something this State can be proud of.

I think the most interesting thing we saw while in Sydney and at the Hamfest was the t.v. which most of us from the country were seeing for the first time. An actual demonstration was given by Ed. Hulme and Vic. Cahill on t.v. sets they had built themselves. Both were very well constructed and worked f.b., a credit to Vic. and Ed.

As far as actual zone news goes, "boy" it's scarce. Your scribe had another visit from Eric 2DY and family who were en route to Griffith. Have not heard Don 2RS at all lately. I have plans to visit Albury shortly, and hope to see the Albury gang in person.

TAMWORTH AND DISTRICT

We start this month's news with an apology for not being on deck for the last two months, but owing to getting our radio club started and trying to educate all the members into being Hams, we have been pressed for time.

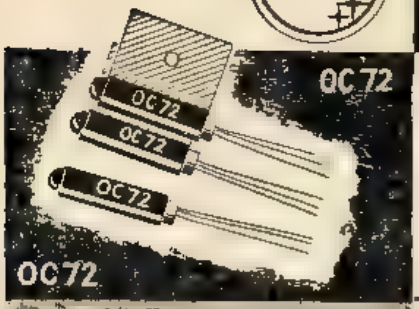
Talking about educating younger members. We had a nasty lesson recently, while working portable from the club rooms on 14 Mc. A VK6 came up zero beat on our frequency at strength 9 plus, and proceded to call YV1AJ. He was unsuccessful in making the contact, so then proceeded to elaborate to some others how he could cut through the rubbish that was going on on the channel and work through it all. The rubbish, of course, was VK2APG/P, at the Radio Club. It is not our intention to do this sort of thing, but I can assure the said gentleman, that his lesson to the 23 members present was most enlightening.

Now some news. Dennis 2AWW is now operating from Tamworth, having installed his modified AT5 which is working f.b. Merv. 2ATD has been successful in working Ken 2ANU at Muswellbrook on a mod. os., running 8 watts. Sam 2LY leaves us this month for a three months' holiday in VK3 land, and is taking his portable with him. Noel 2ASQ has at last got his three element semi-wide-spaced beam up, and it is working very nicely. Noel went to a great deal of trouble to ensure that the beam would be up for a number of years, and has made an excellent job of building it. Bruce 2ZAD now has a xtal controlled rig on 2 mx and puts out quite a nice signal with same; congrats. Bruce, success at last.

Frank 2APF has built a new portable rig, 50w. to a 6146, and is having some good contacts on all bands; may describe the rig at some later date. Nothing has been heard of Sid 2APS, but we believe he has something up his sleeve! Visitors to Tamworth this last couple of months were Norman 2ZL's brother, Ossie 4TN mobile (one of the nicest mobile set-ups we have seen for a long while) and his co-pilot a VK4 Z call. Weather here has been very hot, around the 100 most of the time, and summer static has been most annoying on some bands. We hear Wallie 2AXH has to go to Sydney with his well known XYL, Clare, who is to have an operation; we wish her well and a speedy recovery.

PHILIPS

"Miniwatt" TRANSISTORS



OC72 *JUNCTION* transistor of p-n-p alloy for switching pulse oscillating and general amplification. These transistors are available with an optional cooling fin to ensure absolute thermal stability over the whole range of permissible ambient temperature.

2-OC72 *MATCHED PAIR* of p-n-p junction transistors especially suitable for class B output stages, giving excellent constancy of current amplification factor up to high values of the collector current

LIST PRICE 34/10 each (Matched pair) 2-OC72 69/8

OC70 All-glass p-n-p junction transistor in all-glass construction for medium gain low power audio frequency applications, and for use in switching and oscillator circuits.

OC71 Junction transistor of similar construction to OC70 but intended for use in high gain low power applications up to 300 Kc/s and for switching and oscillator circuits.

LIST PRICE 27/- each

OC65 *Miniature* medium gain transistor intended for medium gain low power audio frequency application up to 25 mW and as a low noise oscillator and in switching circuits where large signals are involved

OC66 *Miniature* p-n-p transistor for high gain low power amplifiers finding application in miniature equipment at frequencies up to 300 Kc/s in common base configuration. The electrical performance is similar to that of the OC71.

LIST PRICE 36/-. each

OC73 *A 50 mW* junction transistor in all-glass construction. Due to its close tolerances, this transistor is particularly suitable for use in professional equipment. For general use as amplifier, oscillator and for switching applications at frequencies up to 500 K/cs.

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OCP71 *Photo Transistor* of p-n-p alloy in all-glass construction. This type has extremely high sensitivity, and may be used to operate a relay direct without amplification.

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PV9-56

COALFIELDS AND LAKES

Duncan 2MC will be active by the time these notes appear, getting modulation on an AT5; probably be on 7 Mc. for a time; very interested in antennaer, too. Apart from 2RU, a Gosford regular, 2AEZ is active on 14 Mc. c.w. Heard Ern chasing the DX. No news of Bob 2KF this month. The Upper Hunter is being kept on the air by 2ANU and 2VU. 2YL seems to be only other station at present on air regularly; getting quite fair results on 14 and 21 Mc. If any zone stations have any news re doings for inclusion in these notes and don't contact me on the air, a note by end of each month will be appreciated.

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VICTORIA

It is with deep regret that the Wireless Institute learned of the death of Don Birkitt (VK3FP), who passed away on Wednesday, 16th January, at Laverton. Don has always taken a great interest in the affairs of the Wireless Institute and was well known for his work in connection with the 2 mx relay of the slow morse transmissions. He had been ill for some months and is survived by his widow and four children.

There was only a moderate attendance at the February general meeting. The first half of the programme was very excellent. Through the courtesy of Roth 3BG, members were privileged to see three very interesting and enjoyable films, namely, "Down A Long Way," "The Persian Story" and "Foothold on Antarctica." The second half of the programme was to have been a discussion on W.I.A. policy, but turned out to be more of a grouch night when members aired their views on almost every subject from the building fund to the 3WI Sunday morning broadcasts and criticism of those poor unfortunates, the very hardest working members of the Institute. However the office-bearers had all the answers at their fingertips and some comments from members of F.E. were very quickly and easily disposed of, in fact in every case the President or Hon. Sec. were able to give answers and explanations to all queries. Syd 3ASC stuck his neck out and volunteered to try a new microphone at 3WI in an endeavour to improve the modulation quality. Whereupon Hon. Sec. 3YS immediately signed him up for service without any further ado.

Things were very lively and I was really enjoying the meeting until some cove in the row behind got up and started to criticise the broadcast script, said, "It was monotonous," he did. Now that broadcast script is my baby, and why does he think we have to have fish and chips every Friday for tea? Well, you're all wrong you see, it's because it takes me all day Friday to do it. And if it's monotonous, it's all the fault of you Ham-bodies. If only you'd buy yourself a copy of the Call Book and the Log Book, we'd sell them all and I wouldn't have to put it in the broadcast so often and then everybody would be happy. However, an airing of opinions is a very good thing every now and then and the general meeting is the place to do it.

The following new members were admitted to the Institute as full members: Messrs. H. W. Ellis (VK3AJE, ex-G3JLG), R. G. Steele (VK3GP), A. W. Adams (VK3VJ), E. F. Caddy (VK3AEC), and W. L. Tremewen, a former member of the Institute's theory classes and who has just recently received his A.O.L.C.P. Mr. Jan van Kerbwijk was admitted as an associate and Messrs. P. R. Armstrong and D. G. Mathews as Junior Associates. Mr. Mathews was present at the meeting and was personally welcomed by the President.

We had a visitor from VK5 present at our meeting, he was Ern 5EN and he seemed to enjoy making the acquaintance of our VK3 members. Ern has a nice friendly personality and the VK3s enjoyed meeting him also. The second S.W.L. 100 Certificate was presented to Warren Moulton for having shown proof of confirmation of reception of 100 Amateur stations. David 3ZAQ was the winner of the October Bi-Monthly All-Band Scramble.

The next general meeting will be held on March 6 and will take the form of a tour of inspection of the Radio and Television section of the Royal Melbourne Technical College with the possibility of a TV lecture also. The Annual General Meeting will be held on 3rd April.

CENTRAL WESTERN ZONE

We are all very sorry to hear of the misfortune that befell Jim 3AOE recently. He lost his home and almost all his possessions when his house was destroyed by fire. This makes the going very hard for Jim, his wife and nine children, so we certainly hope that Jim's luck takes a turn for the better in the very near future and that he soon regains all the things which he so tragically lost.

Gordon 3GW is another station on the air during recent months after a period of inactivity. He is on the land in the Rainbow district and obtains power from 110v. d.c. and a converter giving standard 240v. a.c. Herb 3NN, of Yannac, helped by his enthusiastic son Garry, regularly work Melbourne and Adelaide stations on the 2 mx band as well as being also active on the lower frequencies.

NORTH EASTERN ZONE

I must apologise for the lack of notes fellows, but news cannot be compiled without reporters. The general apathy of the North Eastern Zone towards this place in the mag. is such that it is just a waste of time and the space may as well be used to reprint interesting articles from overseas mags. A lot of the chaps are being kept on their toes during this years' bush fire danger period and therefore cannot spend very much time on the ordinary bands. Some just can't be bothered, some are playing with one-eyed monsters, a few chase DX, but Andy 3FD still turns up for the zone hook-up along with Vern 3AXW; occasionally Bruce 3AGG and Les 3ALE.

There has been a suggestion that a picnic type Zone Convention be held after the proclaimed bush fire danger period is over, and, before the cooler weather sets in, Benalla has been mentioned as a likely spot to hold such a function. Be on the zone hook-ups fellows and put your views on record, do it now because later on will be too late.

An interesting few hours were spent last month with a visit from Aussie 4TN, who did a tour down this way, operating mobile with a most elaborate rig in his ute. Jim 3JK is still active and is enjoying his new in-door shack. Vern 3AXW has taken up water skiing. Peter 3APF and Alan 3UI are busy playing with other branches of electronics, Bruce 3AGG is getting ready for 10 mx with a new converter. Brian 3ASF is playing with new mobile gear, John 3ACK has been reading up on aerials, Sid 3C1 still has his antenna farm up above the house. Associate Earl Scoones is busy taming a new motor bike, and Ray 3FI gets an occasional chance to spend time placing his gear together.

EASTERN ZONE

Amateur Radio in the Eastern Zone area has suffered lately owing to the new one-eye monster, but some stations have found a spare minute or two to come up on 40 and 80 mx; others have been holidaying, namely, 3ZD, 3ZAB, 3ZCR, 3ZDP, and 3AIT who was worked mobile whilst at Port Campbell by Jack 3AJK on 40 mx. Other mobile stations who have been heard were 3AJK/M, 3ZCG/M (on 2 mx), and 3AAV/M (on 40 mx) who worked 3ACA (now residing at West Yallourn, and active on 2, 40 and 80 mx). We were all very sorry to hear of Doug's (3ASE) unfortunate motor car accident; hope you soon get well, Doug.

Two mx has been quite active lately owing to the better summer conditions and the Ross Hull Contest. 3ZD and 3VL worked VK7s. Ron 3ZD also worked 5ZAM and could receive 5BC, but no contact resulted. Other 2 mx DX was 3ATN at Birchip who was worked by 3ZD, 3ZAB and 3ZCG.

The Sale boys are building up better aerials and receivers. Reg 3ZCR is putting up a 5 over 5. Peter 3ZDP already has his 5 over 5 up about 45 ft., with much improved results. We had David 3ZAT/P as a visitor at Maffra over Christmas. David 3DY is starting to get some 2 mx gear ready. Have not heard Jim 3DI at Leongatha for some time; hope to hear you on the hook-up on 144.18 Mc. on Sunday nights Jim. Other stations heard on two were Gordon 3TH (who is building a cubical quad) and Joe 3TO. Still nothing from the Morwell boys.

GEELONG AMATEUR RADIO CLUB

The club activities for 1957 got away to a good start. Fred 3ALG gave an interesting description of his NC173 rx. The various controls were discussed and the efficient noise limiter heard in action. Fred has been working quite a deal of DX in conjunction with an 9WJK. Ted 3AEH has been very quiet on the band, but a visit to his shack has given the reason—TV components litter the QTH. Alf 3AJI is preparing the shack for a new harmonic and we hope to hear more from him soon.

Jock Beckingham gave us another further talk on test equipment he has made. Listeners were privileged to inspect same; beautifully made equipment. John 3SY gave a television report and spent much time in discussing, with the aid of photos, the types of common interference and distortion apparent on a TV screen.

Many members have been mobile and portable. Bill 3AWZ was in the Yarrawonga district and met some of the Albury boys in the person of 2QD and 2RS. Jim 3ABT has been in the Murchison district, while 3AEH spent some time at Western Port Bay.

It is hoped to hold the S.W. Zone Convention at Geelong over the week-end April 6 and 7. All intending participants should contact 3AEH at his QTH.

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QUEENSLAND

BRISBANE AND DISTRICT

We have come to the end of the old financial year and we would like to thank all our members for their support in what has been a very successful period for the Queensland Division. Council hopes that you all will continue to support the Division in the coming year—with the support of our members there's no limit to the things we can do. We now have the "clues" on how to get disposals gear and, though the war has been over for eleven and a half years, the supply of disposals gear is far from dried up. Government Departments have gear which is no longer needed and this is disposed of quite regularly. We are now receiving regular circulars from the Department of Supply listing gear to be disposed of and we are able to tender for gear which would be of use to our members.

Council is trying to arrange lectures for each general meeting and the meetings will be of interest to members, so please attend as many as possible. Brisbane members receive "QTC" during the week the general meeting is held and can't say "I didn't know the meeting was on this week."

Last year members who were slow in sending in their subs. were kept on the mailing list for "QTC" and "A.R." for quite a few months and had to be reminded. Please send your subs. in as soon as possibly and save a long drawn out job for the "poor overworked Secretary." All joking aside, gentlemen, slowness in sending your sub. to the Secretary can prolong his letter writing job and increase the grey hairs that have started to appear in his locks since he took the job.

At the January general meeting the 1957 Palm Beach Convention was discussed and between now and the Queen's Birthday week-end in June, you are going to hear a lot about it. A lot of members said they were completely "in the dark" about the Convention last year and we are going to be certain that that complaint can't be made again this year. We would like to get Lennon's "Broadbeach," but we're afraid we will have to take the next best, the Burleigh National Fitness Camp.

The International Geophysical Year publicity is being intensified and it's about time we started to organise our part. We will obtain full details of the part we can play in the investigations from Professor Webster and it will possibly be published in the very near future. A recently published copy of "QST" gave details of equipment for receiving signals from the satellite to be sent aloft into the stratosphere later this year and an excellent description of the satellite and gear to be covered was published in "R.T. & H." This will be just so much "fruit" for the v.h.f. boys and it may stimulate interest in the "a.c. bands."

The Annual General Meeting will be held on Friday, 22nd March, and the Annual Dinner will be "in session" the next night so that any country members who are in Brisbane at the time can attend both. Last year's Dinner was a huge success and with the increase in membership since then, should make it necessary to serve the dinner in two sittings. Fortunately there is enough room at the Anzac House main dining room but we can dream, can't we?

Activity on the bands has been low in the last month and personal pars are very scarce. There have been some really big solar explosions lately and we are experiencing the usual lull in conditions which follow them. But don't be disheartened, the prediction section of "CQ" has stated that the peak will be a little later than expected at first and now state that the Swiss Federal Solar Observatories put the peak in May or June with a record high smoothed sunspot number.

MARYBOROUGH

Grahame 4DJ has celebrated his first month on the air with 101 QSOs and 14 countries, working on 14 Mc. and 7 Mc. After cleaning up some v.f.o. trouble and other growing pains, 4DJ has a well-modulated signal, and will also use c.w.; uses a folded dipole on 14 Mc. and

now has a Geloso v.f.o. driving a single 807. 4AI has nearly finished a new 14 Mc. xtal-controlled tx with a pair of 3E29s in the final. Plans a compact rotary beam for 14 and 21 Mc.

Arch 4CB shortly due to re-appear on 28 Mc. 4BG concentrating on 14 Mc. DX while the going is good. Ron can't bear to part with his 3 el. 14 Mc. beam, so the new tower when erected will carry a separate 3 el. for 21 Mc. Fred 2FM and family stayed with 4BG while touring during the holidays and visited local shacks.

TOWNSVILLE

The annual and general meeting was held on 31/1/57 at Graham's place (4BX) and although attendance was not up to the usual annual meeting form, it was heartening to see the two new full members present, namely 4PF and 4MF. After disposing of minutes of previous meeting, the old committee was re-elected with the exception of a vice-president, which post was filled by 4BX; the retiring nominee failed to arrive in time for selection. The usual business was quickly put through and it was gratifying to see the bank balance grow by a small amount, although less members had joined in the previous 12 months.

The boys quickly settled into comfortable positions to hear the T.V.I. tape recording by 4HR. It evoked quite a deal of discussion and few of the boys put in advance notice of stations for sale in the event of t.v. coming our way. The tape recorder was lent by new associate member, W. O'Donnell, who aspires to become an Amateur in the future. "Good luck, Bill."

Vern 4LK is back from a holiday in VK3 and managed to see Canberra in the tour, but said unable to meet many of the boys due to trying to see too much at once. Ted 4EJ back from holidays also, fishing at Magnetic Island and now off work due to sore eyes. Allan 4BE another one just back from the south and looking forward to making up lost time on the bands. Eddie 4WH at long last is back at work, being off sick since last May. Good health, Ed. Our most recent full member, Bob Britton, 4MF, put his rig on the air before coming to the meeting and cautiously called CQ on c.w. and first contact was KG6AAY—no local getting the honor of first contact. May the DX soon mount up, Bob.

Next meeting should have a good roll-up as a very lengthy letter has been received from Harry 4HV, giving his experiences in the different ports in all parts of the world he has visited since leaving our midst. You boys who have met and worked Harry while at Heard Island can imagine the doings he tells of. Esmund 4GZ having trouble with his new imported v.f.o. and looking for ways to get the coils back in line again.

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SOUTH AUSTRALIA

Seventy-five members attended the January meeting with Allen 3CX, 5ZX, Alex Anderson and Ces Pike as visitors, all of whom heard and enjoyed another most informative programme given by TVI Committee members Ray 5BT, Rob 5RG, Des 5DK and Brian 5CA, the subject matter being l.p. filters and a t.v.i. proofed tx. Actual filters and, of course, the tx were there for examination, which together with the theory advanced found an appreciative audience for a subject of all importance. Most of us now know what is required to clean up our gear, but seeing it done like that is a real help, for methods of keeping leads short, types of screening, etc., are more easily conveyed by example. Congrats fellows, we, the "back seat" boys, appreciate your efforts on our behalf.

The general business of the meeting was mainly devoted to agenda items for the Easter Convention, most of such being vigorously discussed, too.

The retirement of Mr. Burbury from the Post of Superintendent Wireless for S.A. was announced last month. We add our wishes to the many others already expressed, and trust he will enjoy his now less strenuous life, and take the opportunity of thanking him for his patient guidance and consideration whilst in office. Likewise we extend good wishes and congratulations to his successor, Mr. Trainor, and offer this Division's co-operation in the sphere where our interests are parallel.

The Australia Day holiday again caused a gathering of the VK5 gang at the Annual Picnic, held at the Birdwood Oval. The weather was warm and clear, described by the cricket teams as 'ot, but in all, an ideal picnic day. The only pity of it being that more members didn't come along to enjoy the outing and meet the gang in such an informal atmosphere. Heard of one member who hunted for the Picnic at "The Gorge," you will never live that down, Les.

A great deal of the organising, and carrying out of same, fell on the shoulders of our evergreen worker, Joe 5JO, ably assisted by Luke 5LL, whilst our public relations officer, Norm Caltman, turned up complete with 10w. of audio, a bucket full of mikes, and some records, and generally acted as announcer, commentator, and disc jockey. We are ever grateful to you boys and particularly to Joe who works hard at these functions.

There is always some outstanding feature or features at such gatherings, and this year there were two, firstly, Norm (the P.R. type) sported a W.A.S. dickey dirt, it was not fair really and would have been divided up there and then, only, who wanted to work W.A.S. anyway. The other feature was the children—honestly it would have been hard to find a nicer bunch of happier harmonics anywhere—and seeing them have fun was enjoyment itself. They ranged from 5FO's newest little heart-throb to the larger types who with pop guns, pups, and dolls made an enjoyable day for those of us who were amongst them.

It was pleasing to have Pete 5FM, Scott 5AF, and Don 2AMN (from Broken Hill) amongst us, the regulars don't need mentioning, except perhaps Joe 5JO who brought along his family complete with husbands, nieces and nephews—three car loads.

The kiddies races culminated in prize giving, the "doll-in-ice" finally melted out at the estimated time given by Mr. Audle, whilst Frank Forgie's XYL obtained the lady's prize. Finally the cricket match, once more won by the phone team. There was a suspicion that some of the c.w. team were "ring-ins," but it was too hot to argue.

Gordon 5XU was to have given me some information re his trip to the Caves to pass on to you, but he got a bit "cagy" about it. Now it's known he will be doing an article for the magazine soon, so will give us a more complete story then—we are depending on you Gordon.

The holiday week-end caused a few to go portable/mobile, and amongst those heard were Keith 5MT near Port Pirie using a Type 3 with an aerial held aloft on a box kite!! A good signal too, Keith, and nice to hear you on the d.c. bands. Ron 5MK was portable near Lucky Bay; he also packed quite a signal here.

During the W.I.A. session on a recent Sunday a.m., 5WI went off the air—keep a supply of pennies handy, Gordon, to keep the meter active. The advice being hurled at him on 7146 Kc. whilst he was off had to be heard to be believed, and came from as far afield as Port Pirie, Port Lincoln, Broken Hill, and, yes, Goodwood—for shame, John.

Haven't heard much from the West this month beyond that Alf is going hard at c.w. practice still. John 5MX enjoying fishing and sunbaking. 5LT now back on the air with 6146's in place of the 807s that very blushingly retired. Wal 5DP still active only on Sunday, rather busy at the "salt mine" these days.

Frank 5MZ had the time of his life during his stay in VK3 recently, Jim 5LM laid it on for him and from remarks think TV caused quite an impression. He states quite a few VK3s who are in the strong field area are still able to get by without filters and shielding.

At the time of writing there is great activity in preparation for the National Field Day and from all accounts the boys are not going to let Gordon 5XU carry it off this year. It will be interesting to find out how they all scored this time for field days should be more popular than they are in VK5.

Have heard of five more G4ZU beams in the building stage—there will be some mighty sigs from these parts soon and some worthy competition for the DX. Good luck fellows, you will like them. Reg 5QR, who has just completed his new table topper (2 x 6146s final) and whilst awaiting the completion of the G4ZU, tried out the new rig on a roughly erected VK4CC Multiband and on c.w. finds he can work DX OK on all bands!! Wouldn't it?

SOUTH EAST ZONE

Stewart 5MS is on the air again, having been heard on 20 and on 1st January made his official debut on 15 mx by working another country. Erg 5KU has been on holidays so Radio and Gliding have missed out. Les 5ZAG also on holidays. Tom 5TW has been seen with many paint spots on his shoes, and managed to get some on to the new poles soon to be erected. Associate Don is awaiting results of the limited exam. John 5JA is still busy with TV and his results good. Bram 5AB very busy on E.Fs. frequencies, but finds time to begin building a new tx and mod. in which he hopes to incorporate "ultra" mod. Claude 5CS still active on 7 and 14 Mc. activity down a bit.

TASMANIA

NORTH WESTERN ZONE

Another successful monthly meeting took place at the Devonport Fire Brigade Headquarters on 5th Feb. Congrats. to the Devonport gang on the job done with VL7DE, the Brigade's local 25w. base station. There are also a number of mobile transceivers too, built by the local boys. In fact the whole station is something to see, complete with workshop, meeting room, showers, etc., and not the least the look of pride worn by the members of the Brigade. Thanks chaps.

The constitution came in for some further discussion, following the receipt of a copy from Hobart. Another item of interest for the evening was the display of a TV set, brought along by Athol 7LR; great interest being displayed by the members present. Wonder if those 17 inch tubes would make a good monitor for the rig, Athol? A welcome to the active ranks is extended to Sam 7SM, who is helping the QRM along with the AT5-AR8 combination; good hunting, Sam, and press on you other Associates. Whilst on welcomes, a hand to Les 6LC, who has come amongst us recently, and even brought some of his gear over too. Let's hear you on, Lee, when you have settled in.

Roy 7RN was heard portable from Cressy a Sunday or two ago. Quite a good sig., Roy, seeing we haven't heard from you for some time. How did you like the weather fella? Real Tassy summer, what! Built up a 2 inch mod. checker for myself a little while ago and have been pleased with the improved reports received. Passed the circuit on to Rupe 7RM down south, who was as surprised as I was that it was so simple. Incidentally, Athol 7LR tells me TV sig strength was improved by elevating the yagi beam to an angle of about 25 degrees. Anybody else experimented on this?

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